

ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT FOR
REMEDIAL DESIGN, OPERABLE UNIT 4
AND
FOCUSED FEASIBILITY STUDY, OPERABLE UNIT 8

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I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Settlement Agreement and Order on Consent ("Settlement Agreement") is entered into voluntarily by the United States Environmental Protection Agency ("EPA") and Wyeth Holdings Corporation ("Respondent"). This Settlement Agreement provides that Respondent shall undertake a remedial design, including various procedures and technical analyses, to produce a detailed set of plans and specifications for implementation of the Remedial Action selected in the Record of Decision issued by EPA on September 27, 2012 for the American Cyanamid Superfund Site ("Site"), Operable Unit No. 4 ("OU 4"). This Settlement Agreement also provides that the Respondent will continue to perform, under this Settlement Agreement, certain tasks from the Removal Action as specified in the Statements of Work (SOWs) for this Settlement Agreement. Finally, the Settlement Agreement requires that Respondent shall perform a focused feasibility study for Operable Unit No. 8 ("OU 8"), including any necessary testing and technical analyses, and to prepare a report evaluating alternatives for remedial action for Impoundments 1 and 2 at the Site. In addition, Respondent shall reimburse the United States for Future Response Costs that it incurs, as provided herein.

2. This Settlement Agreement is issued under the authority vested in the President of the United States by Sections 104, 106, 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, ("CERCLA"), 42 U.S.C. §§ 9604, 9606, 9607, and 9622. This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580, 52 Fed. Reg. 2926 (1987), and further delegated to the Regional Administrators on September 13, 1987, by EPA Delegation No. 14-14-C and 14-14-D. This authority was further redelegated on November 23, 2004 by the Regional Administrator of EPA Region 2 to the Director of the Emergency and Remedial Response Division by EPA Region 2 Delegation Nos. 14-14-C and 14-14-D.

3. EPA and Respondent recognize that this Settlement Agreement has been negotiated in good faith and that the actions undertaken by Respondent in accordance with this Settlement Agreement do not constitute an admission of any liability. Respondent does not admit, and retains the right to controvert in any subsequent proceedings other than proceedings to implement or enforce this Settlement Agreement, the validity of the Findings of Fact, Conclusions of Law and Determinations in Sections IV and V of this Settlement Agreement. Respondent agrees to comply with and be bound by the terms of this Settlement Agreement and further agrees that it will not contest the basis or validity of this Settlement Agreement or its terms.

4. The objectives of EPA and Respondent in entering into this Settlement Agreement are to protect the public health and welfare or the environment at the Site by the design of response actions at the Site by Respondent and by completing certain tasks associated with the Removal Action as specified in the SOWs attached to this Settlement Agreement, to reimburse Future Response Costs of EPA, and to resolve the claims of EPA against Respondent as provided in this Settlement Agreement.

5. In accordance with the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300, *et seq.*, as amended ("NCP"), and Section 121(f)(1)(F) of CERCLA, 42 U.S.C. § 9621(f)(1)(F), EPA notified the State of New Jersey (the "State"), by electronic mail dated September 25, 2012, of its plan to enter into negotiations with the Respondent regarding the implementation of the remedial design for the Site, the performance of certain tasks associated with the Removal Action, as specified in the SOWs, and the conduct of an FFS and has provided the State with an opportunity to participate in such negotiations and be a party to this Settlement Agreement.

6. In accordance with Section 122(j)(1) of CERCLA, 42 U.S.C. § 9622(j)(1), EPA notified the natural resources trustees, by letters dated September 27, 2012, of negotiations with the Respondent regarding the release of hazardous substances that may have resulted in injury to the natural resources under federal trusteeship and encouraged the trustee(s) to participate in the negotiation of this Settlement Agreement.

II. PARTIES BOUND

7. This Settlement Agreement applies to and is binding upon EPA and upon Respondent and their successors and assigns. Any change in ownership or corporate status of Respondent including, but not limited to, any transfer of assets or real or personal property shall not alter such Respondent's responsibilities under this Settlement Agreement. The signatories to this Settlement Agreement certify that they are authorized to execute and legally bind the parties they represent.

8. Respondent is liable for carrying out all activities required by this Settlement Agreement.

9. Respondent shall ensure that their contractors, subcontractors, and representatives receive a copy of this Settlement Agreement and comply with this Settlement Agreement. Respondent shall be responsible for any noncompliance with this Settlement Agreement.

III. DEFINITIONS

10. Unless otherwise expressly provided herein, the terms used in this Settlement Agreement that are defined in CERCLA or in regulations promulgated under CERCLA shall have the same meaning as assigned to them by CERCLA or its implementing regulations. Whenever the terms listed below are used in this Settlement Agreement or incorporated by reference into this Settlement Agreement, the following definitions shall apply:

a. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §9601, *et seq.*

b. "Day" shall mean a calendar day. In computing any period of time under this Settlement Agreement, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the close of business on the next working day.

c. "Effective Date" shall be the effective date of this Settlement Agreement as provided in Section XXVIII (Effective Date and Subsequent Modification).

d. "EPA" or "Agency" shall mean the United States Environmental Protection Agency and any successor department or agencies of the United States.

e. "Focused Feasibility Study" or "FFS" shall mean those activities that Respondent shall undertake pursuant to the Focused Feasibility Study Work Plan to determine and evaluate alternatives for remedial action for Operable Unit 8.

f. "Focused Feasibility Study Work Plan" shall mean the document developed pursuant to Paragraph 53 of this Settlement Agreement and approved by EPA, and any amendments thereto. EPA approved the Focused Feasibility Study Work Plan for Operable Unit 8 on September 13, 2012.

g. "Future Response Costs" shall mean all costs including, but not limited to, direct and indirect costs, that the United States incurs in reviewing or developing plans, reports and other items pursuant to this Settlement Agreement, verifying the Work, or otherwise implementing, overseeing, or enforcing this Settlement Agreement, including but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, the costs incurred pursuant to Paragraph 73 (Costs and attorneys fees and any monies paid to secure access, including the amount of just compensation), and Paragraph 110 (Work Takeover).

h. "Institutional Controls" shall mean Proprietary Controls and state or local laws, regulations, ordinances, zoning restrictions, or other governmental controls or notices that: (a) limit land, water, and/or resource use to minimize the potential for human exposure to Waste Material at or in connection with the Site; (b) limit land, water, and/or resource use to implement, ensure non-interference with, or ensure the protectiveness of the Remedial Action; and/or (c) provide information intended to modify or guide human behavior at or in connection with the Site.

i. "Institutional Control Implementation and Assurance Plan" or "ICIAP" shall mean the plan for implementing, maintaining, and reporting on the Institutional Controls set forth in the ROD, prepared in accordance with the Statement of Work ("SOW").

j. "Interest" shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 each year, in accordance with CERCLA § 107(a), 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.

k. "National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan, promulgated pursuant to Section 105

of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, *et seq*, including any amendments thereto.

l. "NJDEP" shall mean the New Jersey Department of Environmental Protection and any successor departments or agencies of the State.

m. "Paragraph" shall mean a portion of this Settlement Agreement identified by an Arabic numeral.

n. "Performance Standards" shall mean the cleanup standards and other measures of achievement of the goals of the Remedial Action as set forth in the Record of Decision for Operable Unit 4.

o. "Proprietary Controls" shall mean easements or covenants running with the land that (a) limit land, water, or resource use and/or provide access rights and (b) are created pursuant to common law or statutory law by an instrument that is recorded by the owner in the appropriate land records office.

p. "OU 4 Record of Decision" or "OU 4 ROD" shall mean the EPA Record of Decision relating to Operable Unit 4 ("OU 4") at the American Cyanamid Superfund Site, and all attachments thereto that the Regional Administrator, EPA Region 2, or his/her delegate signed on September 27, 2012. The Site-wide remedy presented in the OU 4 ROD combines OU 4 (site soil), OU 5 (site groundwater), OU 7 (site-related wetlands) and Impoundments 3, 4, 5, 13, 17 and 24 (all of which were previously included in OU 1, OU 2 or OU 3). Accordingly, any reference to Operable Unit 4 in this Settlement Agreement shall incorporate those other Operable Units that are addressed in the OU 4 ROD. Any references in this Settlement Agreement to enumerated Operable Units (or "OU") or Impoundments shall have the meaning ascribed to such specific Operable Units or Impoundments as in the OU 4 ROD.

q. "Removal Action" shall mean the Work required by the Administrative Settlement Agreement and Order on Consent for Removal Action, between the EPA and Wyeth Holdings Corporation, Docket No. CERCLA-02-2011-2015, signed on July 19, 2011.

r. "Remedial Design(s)" or "RD(s)" shall mean those activities that Respondent shall undertake to develop the final plans and specifications for the Remedial Action for the Operable Units described in the OU 4 ROD pursuant to the Remedial Design Work Plan.

s. "Remedial Design Work Plan" or "RDWP" shall mean the document developed pursuant to Paragraph 52(c) of this Settlement Agreement and approved by EPA, and any amendments thereto.

t. "Section" shall mean a portion of this Settlement Agreement identified by a Roman numeral and includes one or more paragraphs.

u. "Settlement Agreement" shall mean this Administrative Settlement Agreement and Order on Consent and all appendices attached hereto. In the event of conflict between this Settlement Agreement and any appendix, this Settlement Agreement shall control.

v. "Respondent" shall mean the signatory to this Settlement Agreement other than EPA.

w. "Site" shall mean the American Cyanamid Superfund Site, which encompasses approximately 435 acres of real property adjoining the Raritan River and which is owned by Wyeth Holdings Corporation and is primarily situated within the southeastern section of Bridgewater Township, Somerset County, New Jersey. Consistent with the NCP (section 300.5) "on-Site" means the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response actions undertaken pursuant to this Settlement Agreement.

x. "State" shall mean the State of New Jersey.

y. "Statement of Work for the Focused Feasibility Study" or "FFS SOW" shall mean the statement of work for the development of the Focused Feasibility Study for Operable Unit 8, and certain tasks associated with the Removal Action, as specified in the FFS SOW, and any modifications made thereto in accordance with this Settlement Agreement, as set forth in Appendix B of this Settlement Agreement. The FFS SOW is incorporated into this Settlement Agreement and is an enforceable part of this Settlement Agreement.

z. "Statement of Work for the Remedial Design" or "RD SOW" shall mean the Statement of Work for the development of the Remedial Design for Operable Unit 4, and certain tasks associated with the Removal Action, as specified in the RD SOW, and any modifications made thereto in accordance with this Settlement Agreement, as set forth in Appendix A of this Settlement Agreement. The RD SOW is incorporated into this Settlement Agreement and is an enforceable part of this Settlement Agreement.

aa. "Waste Material" shall mean (1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (3) any "solid waste" under Section 1004(27) of the Solid Waste Disposal Act (also known as the Resource Conservation and Recovery Act or "RCRA"), 42 U.S.C. § 6903(27); and (4) any mixture containing any of the constituents noted in (1),(2) or (3), above.

ab. "Work" shall mean all activities Respondent is required to perform under this Settlement Agreement, except those required by Section XIII (Record Retention).

IV. FINDINGS OF FACT

11. The Site is approximately 435 acres in size and is mostly situated within the southeastern section of Bridgewater Township, Somerset County, New Jersey.

12. In 1915, Calco Chemical Company constructed a facility at the Site to manufacture intermediate chemicals and dyes. That facility expanded over the next sixty years to become one of the nation's largest dye and organic chemical plants, producing thousands of chemical products.

13. American Cyanamid Company purchased the Site in 1929 and continued operations at the Site until 1994 when American Home Products Corporation purchased the American Cyanamid Company.

14. All manufacturing ceased at the Site by June 1999. By the end of November 2000, almost all buildings on the Site were demolished.

15. In March 2002, American Home Products Corporation changed its name to Wyeth.

16. Title to the Site was held in the name of the American Cyanamid Company until December 2002 when it changed its name to Wyeth Holdings Corporation.

17. In a consent decree entered by the United States District Court of New Jersey on July 9, 2003 (Civil Action No. 03-1758), Wyeth and Wyeth Holdings Corporation agreed to pay the sum of \$220,000.00 for all past costs incurred by EPA relating to the Site prior to August 17, 2003.

18. In October 2009, Wyeth was acquired by Pfizer Inc. ("Pfizer"), and became a wholly-owned subsidiary of Pfizer. Title to the Site is now held in the name of Wyeth Holdings Corporation ("Wyeth"), a wholly-owned subsidiary of Pfizer.

19. Pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the Site on the National Priorities List ("NPL") on September 8, 1983.

20. The Site, as originally listed on the NPL, encompassed approximately 575 acres of land. In 1998, EPA deleted the northern 140 acres of the Site, known as the Hill Property, from the NPL and that land was made available for redevelopment.

21. During the approximate 75-year manufacturing history at the Site, numerous organic and inorganic chemical raw materials were used to produce products, including rubber chemicals, pharmaceuticals, dyes, pigments, chemical intermediates, and petroleum-based products. Waste Material was stored and disposed in areas of the Site referred to as "Impoundments."

22. Due to the manufacturing operations at the Site, soil and groundwater at the Site were contaminated.

23. The NJDEP was the lead agency at the Site from 1983 until 2009 and entered into Administrative Consent Orders ("ACOs") with American Cyanamid in 1982 and 1988 (later amended in 1994) to investigate and remediate the Site. By letter dated March 17, 2009, NJDEP informed Respondent that it was transferring oversight and regulatory lead of the Site to EPA and would hold in abeyance the requirements of the NJDEP ACOs, with limited possible exceptions, as long as Respondent implemented the Site investigation and cleanup under EPA oversight. As of July 13, 2009, EPA assumed the lead role for Superfund oversight, with NJDEP providing a supporting role.

24. There have been several Records of Decision ("RODs") and two Explanations of Significant Differences ("ESD") issued for the Site. RODs were issued on September 28, 1993; July 12, 1996; and September 28, 1998. One ESD to the July 1996 OU 2 ROD was issued on November 30, 1998 while the other ESD to the September 1998 OU 3 ROD was issued on May 31, 2007. Remedies selected pursuant to these RODs and the ESD included the remediation of selected Impoundments and groundwater remediation and monitoring.

25. As part of the 1998 ROD, the Impoundment 8 Facility was designated by EPA as a Corrective Action Management Unit ("CAMU") pursuant to regulations issued under the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §6901, *et seq.* the Impoundment 8 Facility accepts only Site-related materials defined under RCRA Subtitle C landfill requirements.

26. In March 2004, Respondent proposed that most remedial action work be suspended and a reassessment be performed for the entire Site through an action called a Comprehensive Site-wide Feasibility Study which would result in one Site-wide ROD. EPA and NJDEP agreed and Wyeth began the Study. Remedial action continued for Impoundments 14, 15, 16 and 20 as well as continued pumping of at least 650,000 gallons per day bedrock groundwater for subsequent treatment. Routine site operations, maintenance and monitoring also continued.

27. In 2009, EPA and NJDEP agreed to remove Impoundments 1 and 2 from the Comprehensive Site-wide Feasibility Study due to their location and complexity. A FFS will be performed on Impoundments 1 and 2 with its own specific remedy for each impoundment to be determined once the FFS is completed.

28. In December 2010, during a Site-wide inspection, Respondent observed groundwater discharges ("seeps") on the shoreline along the Raritan River in the vicinity of Impoundments 1 and 2 into the Raritan River. A sample from one of the seeps reported a result of up to 20,000 parts per billion of benzene.

29. In February 2011, EPA and Respondent developed an interim mitigation system plan to immediately address the seeps. Sand bags filled with activated carbon were installed along the river at the seep discharge points.

30. On July 19, 2011, Respondent signed an Administrative Settlement Agreement and Order on Consent (Docket No. CERCLA-02-2011-2015), with EPA requiring that Respondent implement the Removal Action, which included the design and construction of a groundwater removal system to intercept and capture the releases of benzene contaminated groundwater emanating from the Site into the Raritan River .

31. Pursuant to the Removal Action, Respondent completed construction of the system in May 2012. The system includes a collection trench, a containment wall and an interim groundwater treatment plant. The treated water is discharged into Cuckel's Brook (also referred to as Cuckhold's Brook) under a New Jersey Pollutant Discharge Elimination System/Discharge to Surface Water ("NJPDES/DSW") Permit Equivalency.

32. Hazardous substances present at the Site may be an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of hazardous substances from the Site. Exposure to the various hazardous substances which are present at the Site (including, but not limited to, benzene, benzo(a)anthracene, benzo(a)pyrene, chlorobenzene, chromium, 1,2-dichlorobenzene, lead, mercury, naphthalene, nitrobenzene, n-nitrosodiphenylamine, toluene, and xylene) by direct contact, inhalation, or ingestion may cause a variety of adverse human health effects.

33. On February 16, 2012, pursuant to Section 117 of CERCLA, 42 U.S.C. §9617, EPA published notice of the completion of the Comprehensive Site-wide Feasibility Study along with the release of the Proposed Plan identifying EPA's preferred remedy for the entire Site (excluding Impoundments 1 and 2) in a major local newspaper of general circulation. EPA provided an opportunity for written and oral comments from the public on the Proposed Plan.

34. A public meeting was held on March 8, 2012 to explain the selected remedy in the Proposed Plan and to also accept oral and written comments on the remedy.

35. After evaluating all public oral and written comments submitted to EPA during the public comment period, EPA selected the final remedy and issued the OU 4 ROD on September 27, 2012.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

36. Based on EPA's Findings of Fact set forth above, as well as the Administrative Record supporting this Settlement Agreement, EPA has determined that:

37. The Site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. §9601(9).

38. Many substances found at the Site, as identified in the Findings of Fact above are "hazardous substances" as that term is defined in Section 101(14) of CERCLA, 42 U.S.C. §9601(14).

39. Respondent is a "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. §9601(21).

40. Respondent is a responsible party as defined in Section 107(a) of CERCLA, 42 U.S.C. §9607(a), and is subject to this Settlement Agreement under Section 106(a) of CERCLA, 42 U.S.C. §9606(a). Respondent is liable for performance of response actions required by this Settlement Agreement and for response costs to be incurred at the Site not inconsistent with the NCP. Respondent is the "owner" of the Site, as defined by Section 101(20) of CERCLA, 42 U.S.C. §9601(20) and within the meaning of Section 107(a) of CERCLA, 42 U.S.C. §9607(a).

41. The conditions described in the Findings of Fact and the various hazardous substances which are present at the Site constitute an actual or threatened "release" of a hazardous substance from the facility as defined by Section 101(22) of CERCLA, 42 U.S.C. §9601(22).

VI. SETTLEMENT AGREEMENT AND ORDER

42. Based upon the foregoing Findings of Fact, Conclusions of Law and Determinations, and the Administrative Record for the Site, it is hereby Ordered and Agreed that Respondent shall comply with all provisions of this Settlement Agreement, including, but not limited to, all Appendices to this Settlement Agreement.

VII. DESIGNATED PROJECT MANAGER AND COORDINATORS

43. Respondent has retained, and EPA has approved, the contractors identified in Appendix A and B to perform the Work. Respondent shall also notify EPA of the name(s) and qualification(s) of any other contractor(s) or subcontractor(s) retained to perform the Work at least 14 days prior to commencement of such Work. EPA retains the right to disapprove of any or all of the contractors and/or subcontractors retained by Respondent. If EPA disapproves of a selected contractor, Respondent shall retain a different contractor and shall notify EPA of that contractor's name and qualifications within 7 days of EPA's disapproval. With respect to any contractor proposed to be a Supervising Contractor, Respondent shall demonstrate that the proposed contractor has a quality system that complies with the Uniform Federal Policy for Implementing Quality Systems (UFP-QS), (EPA/505/F-03/001, March 2005), by submitting a copy of the proposed contractor's Quality Management Plan ("QMP"). EPA will issue a notice of disapproval or an authorization to proceed. Any decision not to require submission of the contractor's QMP should be documented in a memorandum from the Remedial Project Manager ("RPM") and Regional Quality Assurance personnel to the Site file.

44. Within 15 days after the Effective Date, Respondent shall designate one Project Coordinator for the Remedial Design and one Project Coordinator for the Focused Feasibility Study. These Project Coordinators shall be responsible for administration of all actions of Respondent, with respect to their relevant projects, required by this Settlement Agreement.

Respondent shall submit to EPA the designated Project Coordinators' names, addresses, telephone numbers, email address, and qualifications, as well as those of any Alternate Project Coordinators. The Project Coordinators shall not be attorneys. To the greatest extent possible, the designated Project Coordinators or designated Alternate Project Coordinators shall be present on-Site or readily available during Site Work. EPA retains the right to disapprove of the designated Project Coordinators or Alternate Project Coordinators. If EPA disapproves of a designated Project Coordinator or Alternate Project Coordinator, Respondent shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number, email address, and qualifications within 14 days following EPA's disapproval. Receipt by Respondent's Project Coordinator of any notice or communication from EPA relating to this Settlement Agreement shall constitute receipt by the Respondent.

45. EPA has designated Joseph Battipaglia of the Special Projects Branch, Region 2 as its Project Coordinator for the work related to the Statement of Work for the Remedial Design (OU 4) and the completion of certain tasks associated with the Removal Action, as specified in the RD SOW. The OU 4 Project Coordinator shall direct, oversee, and have authority over those tasks associated with the Removal Action that are set forth in the RD SOW. In the event that the OU 4 Project Coordinator is not available, the OU 8 Project Coordinator may function in this capacity.

46. EPA has designated Mark Austin of the New Jersey Remediation Branch, Region 2 as its Project Coordinator for the work related to the Statement of Work for the Focused Feasibility Study (OU 8) and the completion of certain tasks associated with the Removal Action, as specified in the FFS SOW. The OU 8 Project Coordinator shall direct, oversee, and have authority over those tasks associated with the Removal Action that are set forth in the FFS SOW. In the event that the OU 8 Project Coordinator is not available, the OU 4 Project Coordinator may function in this capacity.

47. All communications, whether written or oral, from Respondents to EPA shall be directed to EPA's Remedial Project Manager for the respective Operable Unit. Respondents shall submit to the EPA RPM, and NJDEP copies of all documents, including plans, reports, and other correspondence, which are developed pursuant to this Order. Respondent shall also submit documents to the Site Attorney, upon request. Respondent shall send draft reports and routine written communications via electronic mail. Respondent shall send final reports, once approved by EPA, via certified mail or overnight mail to the following addresses:

2 Copies to: 1 hard copy and 1 electronic

Joseph Battipaglia, Remedial Project Manager
American Cyanamid Superfund Site OU 4
Special Projects Branch
Emergency and Remedial Response Division
U.S. Environmental Protection Agency, Region 2
290 Broadway, 19th Floor

New York, New York 10007-1866

and by email at battipaglia.joseph@epa.gov

2 Copies to: 1 hard copy and 1 electronic

Mark Austin, Remedial Project Manager
American Cyanamid Superfund Site OU 8
New Jersey Remediation Branch
Emergency and Remedial Response Division
U.S. Environmental Protection Agency, Region 2
290 Broadway, 19th Floor
New York, New York 10007-1866

and by email at austin.mark@epa.gov

1 Copy (if requested) to: 1 electronic

American Cyanamid Superfund Site Attorney
New Jersey Superfund Branch
Office of Regional Counsel
U.S. Environmental Protection Agency, Region 2
290 Broadway, 17th Floor
New York, New York 10007-1866

1 Hard Copy to:

New Jersey Dept. of Environmental Protection
Attn: Site Manager, American Cyanamid Site
401 East State Street
P.O. Box 028
Trenton, N.J. 08625-0028

48. EPA's Project Coordinators shall have the authority lawfully vested in a Remedial Project Manager ("RPM") and On-Scene Coordinators ("OSC") by the NCP. In addition, EPA's Project Coordinators shall have the authority as provided in the NCP, to halt any Work required by this Settlement Agreement and to take any necessary response action when the Project Coordinator determines that conditions at the Site may present an immediate endangerment to public health or welfare or the environment. The absence of the EPA Project Coordinator from the area under study pursuant to this Settlement Agreement shall not be cause for the stoppage or delay of Work.

49. EPA shall arrange for a qualified person to assist in its oversight and review of the conduct of the Remedial Design, as required by Section 104(a) of CERCLA, 42 U.S.C. §9604(a). Such person shall have the authority to observe Work and make inquiries in the absence of EPA.

50. EPA and Respondent shall have the right subject to Paragraph 44, to change their respective designated Project Coordinators. Respondent shall notify EPA 7 days before such a change is made. The initial notification may be made orally, but shall be promptly followed by a written notice.

VIII. WORK TO BE PERFORMED

51. Respondent shall perform all actions necessary to implement the Statements of Work (Appendices A and B), including but not limited to, the design of the remedy as set forth in the OU 4 ROD and the performance of the FFS for OU 8. The RD SOW requires that the Remedial Design shall be addressed in two remedial components: (1) Impoundment Contents and Site-wide Soils; and (2) Groundwater. The Groundwater remedial component will consist of two sub-components, namely (i) Groundwater Extraction System (GWES) and (ii) Site-wide Groundwater Treatment Facility (GWTF). Both remedial components will integrate and incorporate certain tasks associated with the Removal Action, as specified in the SOWs (Appendices A and B). These remedial components shall be addressed simultaneously, on parallel tracks.

52. Work Plans and Implementation for the Remedial Design.

a. Within 45 days from EPA approval of the Project Coordinator, Respondent shall submit to EPA a Pre-Design Investigation (PDI) Work Plan. The PDI Work Plan may be submitted as separate PDI Work Plan deliverables for each of the modules within the two remedial components. The PDI Work Plan(s) shall provide for investigations, studies and testing required for the design of the remedy set forth in the OU 4 ROD, in accordance with the SOW in Appendix A. Upon its approval by EPA pursuant to Section IX (EPA Approval of Plans and Other Submissions), the PDI Work Plan(s) shall be incorporated into and become enforceable under this Settlement Agreement. The Respondent shall conduct the PDI work and any subsequent phases in accordance with the approved PDI Work Plan(s), associated addenda, the SOW in Appendix A, and this Settlement Agreement. At any time during the Work, if information becomes available that the parties agree indicates modifications to any of the PDI Work Plan(s) are needed to meet the study objectives, the Respondent shall submit a proposal to EPA for approval with the recommended changes within five days or such longer time as EPA may approve. Any modifications will be made in accordance with this Settlement Agreement.

b. Following completion of all PDI field sampling activities under a given module of the PDI Work Plan, the Respondent shall submit a Field Sampling and Analysis Report (FSAR) for that module in accordance with the specifications outlined in the RD SOW. The FSAR(s) shall include the results from the sampling activities and a brief technical memorandum summarizing the PDI findings. EPA comments on the FSAR(s) shall be addressed in a response to comments or in a subsequent design deliverable, as approved by EPA. Within forty-five (45) days from EPA approval of all FSAR(s) for a given remedial component, the Respondent shall submit to EPA a PDI Summary Report summarizing all of the PDI findings within that remedial component. EPA comments on the PDI Summary

Report for each remedial component shall be addressed in a response to comments or in a subsequent design deliverable, as approved by EPA.

c. Within sixty (60) days from EPA approval of the PDI Summary Report for each remedial component, the Respondent shall submit a Remedial Design Work Plan (RDWP) for that component to EPA for review and approval pursuant to the Settlement Agreement. Each RDWP shall include tasks, work plans, field work, data collection, and schedules for development of the RD for each component, as necessary to ensure compliance with Performance Standards and other requirements set forth in the OU 4 ROD, this Settlement Agreement, and the SOW, including the preparation and submission of the Preliminary RD Reports (30% completion), the Pre-Final RD Reports (90% completion), and the Final RD Reports (100% completion) (collectively, RD Reports) for each remedial component resulting in separate RDs for each remedial component. The RDWP shall be organized by remedial component.

d. Upon approval of the RDWP by EPA, pursuant to Section IX (EPA Approval of Plans and Other Submissions), Respondent shall implement the RDWP. Respondent shall submit to EPA and the State all plans, submittals, and other deliverables required under the approved RDWP in accordance with the approved schedule for review. Except for activities related to the design of the GWES and GWTF, or as otherwise directed by EPA, Respondent shall not commence further Remedial Design activities at the Site prior to approval of the RDWP.

53. FFS for Impoundments 1 and 2. Respondent shall conduct the FFS in accordance with the provisions of this Settlement agreement, the FFS SOW, the FFS Work Plan, CERCLA, the NCP and, as appropriate and applicable, EPA guidance, including, but not limited to the "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA" (OSWER Directive #9355.3-01, October 1988 or subsequently issued guidance), and guidance referenced therein, and guidances referenced in the FFS SOW, as may be amended or modified by EPA. The FFS shall evaluate risks to human health and ecological receptors (per OSWER Directive 9355.0-30). The FFS shall develop and evaluate alternatives for remedial action to prevent, mitigate or otherwise respond to or remedy the release or threatened release of hazardous substances, pollutants, or contaminants at or from the Site. The alternatives evaluated must include, but shall not be limited to, the range of alternatives described in the NCP, and shall include remedial actions that utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. In evaluating the alternatives, Respondent shall address the factors required to be taken into account by Section 121 of CERCLA, 42 U.S.C. §9621, and Section 300.430(e) of the NCP, 40 C.F.R. §300.430(e).

54. Respondent shall conduct all work in accordance with the OU 4 RD SOW, the OU 4 ROD, the OU 8 FFS SOW, CERCLA, the NCP, and all applicable EPA guidance.

55. EPA's Project Coordinators shall use their best efforts to inform Respondent if new or revised guidance may apply to the Work.

56. Respondent shall perform the tasks and submit the deliverables that the RD SOW and FFS SOW set forth. EPA will approve, approve with conditions, modify, or disapprove each deliverable that Respondent submits under this Settlement Agreement and the RD SOW and FFS SOW, pursuant to Section IX (EPA Approval of Plans and Other Submissions).

57. Upon EPA's approval, this Settlement Agreement incorporates any reports, plans, specifications, schedules, and attachments that this Settlement Agreement or the RD SOW and FFS SOW require. With the exception of extensions that EPA allows in writing or delays which are covered by Section XVII of this Settlement Agreement (Force Majeure), any non-compliance with such EPA-approved reports, plans, specifications, schedules, and attachments shall be considered a violation of this Settlement Agreement and will subject Respondent to stipulated penalties in accordance with Section XVIII (Stipulated Penalties) of this Settlement Agreement.

58. If any unanticipated or changed circumstances exist at the Site that may significantly affect the Work or schedule, Respondent shall notify the appropriate EPA Project Coordinator by telephone within 24 hours of discovery of such circumstances. Such notification is in addition to any notification required by Section XVII (Force Majeure).

59. If EPA determines that additional tasks, including, but not limited to, additional investigatory work or engineering evaluation, are necessary to complete the Work, EPA shall notify Respondent in writing. Respondent shall submit a work plan to EPA for the completion of such additional tasks within 30 days of receipt of such notice, or such longer time as EPA agrees. The work plan shall be completed in accordance with the same standards, specifications, and requirements of other deliverables pursuant to this Settlement Agreement. EPA will review and comment on, as well as approve, approve with conditions, modify, or disapprove the work plan pursuant to Section IX (EPA Approval of Plans and Other Submissions). Upon approval or approval with modifications or conditions of the work plan, Respondent shall implement the additional work in accordance with the schedule of the approved work plan. Failure to comply with this Subsection, including, but not limited to, failure to submit a satisfactory work plan, shall subject Respondents to stipulated penalties as set forth in Section XVIII (Stipulated Penalties).

60. Quality Assurance and Sampling.

a. All sampling and analyses performed pursuant to this Settlement Agreement shall conform to EPA direction, approval, and guidance regarding sampling, quality assurance/quality control ("QA/QC"), data validation, and chain of custody procedures.

b. Upon request by EPA, Respondent shall have a laboratory analyze samples submitted by EPA for QA monitoring. Respondent shall provide to EPA the QA/QC procedures followed by all sampling teams and laboratories performing data collection and/or analysis.

c. Upon request by EPA, Respondent shall allow EPA or its authorized representatives to take split and/or duplicate samples. Respondent shall notify EPA not less than 14 days in advance of any sample collection activity, unless shorter notice is agreed to by EPA. EPA shall have the right to take any additional samples that EPA deems necessary. Upon request, EPA shall allow Respondent to take split or duplicate samples of any samples it takes as part of its oversight of Respondents' implementation of the Work.

d. If, at any time during the Remedial Design process, Respondent becomes aware of the need for additional data beyond the scope of the approved Work Plans, Respondent shall have an affirmative obligation to submit to the appropriate EPA Project Coordinator, within 30 days, a memorandum documenting the need for additional data.

61. Community Involvement Plan. EPA will prepare a community involvement plan, or amend the existing plan, in accordance with EPA guidance and the NCP. As reasonably requested by EPA, Respondents shall provide information supporting EPA's community involvement plan and shall participate in the preparation of such information for dissemination to the public and in public meetings that may be held or sponsored by EPA to explain activities at, or concerning, the Site.

62. Emergency Response and Notification of Releases.

a. In the event of any action or occurrence during performance of the Work, which causes or threatens a release of Waste Material from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action to prevent, abate, or minimize such release or threat of release and shall immediately notify the National Response Center at (800) 424-8802 and the appropriate EPA Project Coordinator or, in the event of his/her unavailability, the Chief of the Mega Projects Section of the Emergency and Remedial Response Division of EPA Region 2 at (212) 637-4310 of the incident or Site conditions. Respondents shall take such actions in consultation with EPA's Project Coordinator, or other available authorized EPA officer, and in accordance with all applicable provisions of this Order, including, but not limited to, the Health and Safety Plans, the Contingency Plans, and any other applicable plans or documents developed pursuant to the SOW. In the event that Respondent fails to take appropriate response action as required by this Paragraph, and EPA takes such action instead, Respondent shall reimburse EPA for all costs of the response action not inconsistent with the NCP, pursuant to Section XV (Payment of Response Costs).

b. Respondent shall submit a written report to EPA within 7 days after each such release, setting forth the events that occurred and the measures taken, or to be taken, to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. §9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. §11004, *et seq.*

IX. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS

63. After review of any plan, report, or other item that is required to be submitted for approval pursuant to this Settlement Agreement, in a notice to Respondent, EPA shall: (a) approve, in whole or in part, the submission; (b) approve the submission upon specified conditions; (c) modify the submission to cure the deficiencies; (d) disapprove, in whole or in part, the submission, directing that Respondent modify the submission; or (e) any combination of the above. However, EPA shall not modify a submission without first providing Respondent at least one notice of deficiency and an opportunity to cure within thirty (30) days, except where to do so would cause serious disruption to the Work or where previous submission(s) have been disapproved due to material defects.

64. In the event of approval, approval upon conditions, or modification by EPA, pursuant to Subparagraph 63(a), (b), (c), or (e), Respondent shall proceed to take any action required by the plan, report, or other deliverable, as approved or modified by EPA subject only to their right to invoke the Dispute Resolution procedures set forth in Section XVI (Dispute Resolution) with respect to the modifications or conditions made by EPA. Following EPA approval or modification of a submission or portion thereof, Respondent shall not thereafter alter or amend such submission or portion thereof unless directed by EPA. In the event that EPA modifies the submission to cure the deficiencies pursuant to Subparagraph 63(c) and the submission had a material defect, EPA retains the right to seek stipulated penalties, as provided in Section XVIII (Stipulated Penalties).

65. Resubmission.

a. Upon receipt of a notice of disapproval, Respondent shall, within 14 days or such longer time as specified by EPA in such notice, correct the deficiencies and resubmit the plan, report, or other deliverable for approval. Any stipulated penalties applicable to the submission, as provided in Section XVIII, shall accrue during the 14-day period or otherwise specified period but shall not be payable unless the resubmission is disapproved or modified due to a material defect as provided in Paragraphs 66 and 67.

b. Notwithstanding the receipt of a notice of disapproval, Respondent shall proceed to take any action required by any non-deficient portion of the submission, unless otherwise directed by EPA. Implementation of any non-deficient portion of a submission shall not relieve Respondent of any liability for stipulated penalties under Section XVIII (Stipulated Penalties).

c. Respondent shall not proceed further with any subsequent activities or tasks until receiving EPA approval, approval on condition, or modification of the deliverable. While awaiting EPA approval, approval on condition, or modification of this deliverable, Respondent shall proceed with all other tasks and activities that may be conducted independently of this deliverable, in accordance with the schedule set forth in this Settlement Agreement.

d. For all remaining deliverables not specifically listed in Paragraphs 52 and 53, Respondent shall proceed with all subsequent tasks, activities, and deliverables without awaiting EPA approval on the submitted deliverable. EPA reserves the right to stop Respondent from proceeding further, either temporarily or permanently, on any task, activity, or deliverable at any point during the Work, if that task or activity could result in a release or threat of a release of a hazardous substance or pollutant or contaminant from the Site.

66. If EPA disapproves a resubmitted plan, report, or other deliverable, or portion thereof, EPA may again direct Respondent to correct the deficiencies. EPA shall also retain the right to modify or develop the plan, report, or other deliverable. Respondent shall implement any such plan, report, or deliverable as corrected, modified, or developed by EPA, subject only to Respondent's right to invoke the procedures set forth in Section XVI (Dispute Resolution).

67. If upon resubmission, a plan, report, or other deliverable is disapproved or modified by EPA due to a material defect, Respondent shall be deemed to have failed to submit such plan, report, or other deliverable timely and adequately, unless Respondent invokes the dispute resolution procedures in accordance with Section XVI (Dispute Resolution) and EPA's action is revoked or modified pursuant to a Dispute Resolution decision issued by EPA or superseded by an agreement reached pursuant to that Section. The provisions of Section XVI (Dispute Resolution) and Section XVIII (Stipulated Penalties) shall govern the implementation of the Work and accrual and payment of any stipulated penalties during Dispute Resolution. If EPA's disapproval or modification is not otherwise revoked, modified, or superseded as a result of a decision or agreement reached pursuant to the Dispute Resolution process set forth in Section XVI, stipulated penalties shall accrue for such violation from the date on which the initial submission was originally required, as provided in Section XVIII.

68. In the event that EPA takes over some of the tasks, Respondent shall incorporate and integrate information supplied by EPA into the RD Reports.

69. All plans, reports, and other deliverables submitted to EPA under this Settlement Agreement shall, upon approval or modification by EPA, be incorporated into and enforceable under this Settlement Agreement. In the event EPA approves or modifies a portion of a plan, report, or other deliverable submitted to EPA under this Settlement Agreement, the approved or modified portion shall be incorporated into and become enforceable under this Settlement Agreement.

X. REPORTING

70. Progress Reports.

- e. Respondent shall submit written progress reports to EPA concerning actions undertaken pursuant to this Settlement Agreement on or before the fifteenth day of each month following the effective date of the Settlement Agreement until termination of this Settlement Agreement, unless

otherwise directed in writing by the assigned Project Coordinator. These reports shall describe all significant developments during the preceding period, including the actions performed and any problems encountered, and the developments anticipated during the next reporting period, including a schedule of actions to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

- f. To the extent required by the RDWP or Focused Feasibility Study Work Plan, Respondent shall summarize and submit to EPA the results of all validated sampling and/or tests or other validated analytical data generated with respect to implementing this Settlement Agreement in the monthly progress reports that the RD and FFS SOWs require. Respondents shall maintain custody of all information and data that the Final Remedial Design Report and Final FFS Report and any deliverable relied upon or referenced. Upon EPA's request, Respondents shall provide such information and data to EPA.
- c. Respondents shall report communications that it has with local, state, or other federal authorities related to the Remedial Design Work and the FFS Work in the monthly progress reports.

71. Final Reports.

a. Within 60 days after completion of all Work required by this Settlement Agreement, Respondent shall submit for EPA review and approval the Final RD Report (100% completion) for the OU 4 Remedy and the Final Focused Feasibility Study for OU 8. These reports shall constitute the final reports for the Work and shall conform, at a minimum, with the relevant requirements set forth in Section 300.165 of the NCP entitled "OSC Reports." The final reports shall include the following certification signed by a person who supervised or directed preparation of that report:

To the best of my knowledge, after thorough investigation, I certify that the information contained in, or accompanying, this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

b. If EPA determines that any Work has not been completed in accordance with this Settlement Agreement, EPA will notify the Respondent, provide a list of the deficiencies, and require that the Respondent modify the Work Plan if appropriate to correct such deficiencies. The Respondent shall implement the modified and approved Work Plan and shall submit the required deliverables.

c. After EPA approves the Final Reports for the design for OU 4, and the FFS for OU 8, EPA will provide written notice to the Respondent pursuant to Section XXIX (Notice of Completion of Work) of the Settlement Agreement.

XI. SITE ACCESS AND INSTITUTIONAL CONTROLS

72. If Respondent owns or controls the Site, or any property where access is needed to implement this Settlement Agreement, Respondent shall, commencing on the Effective Date, provide EPA, and its representatives, including contractors, with access at all reasonable times to the Site, or such other property, to conduct any activity related to this Settlement Agreement. Respondent, who owns or control property at the Site, shall, at least 30 days prior to the conveyance of any interest in real property at the Site, give written notice to the transferee that the property is subject to this Settlement Agreement and written notice to EPA of the proposed conveyance, including the name and address of the transferee. Respondent, who owns or controls property at the Site also agrees to require that their successors comply with the immediately preceding sentence, this Section and Section XII (Access to Information).

73. Where any action under this Settlement Agreement is to be performed in areas owned by, or in possession of, someone other than Respondent, Respondent shall use its best efforts to obtain all necessary access agreements within sixty (60) days after the Effective Date, or as otherwise specified in writing by the Project Coordinator. Respondent shall immediately notify EPA if, after using their best efforts, they are unable to obtain such agreements. For purposes of this Paragraph, "best efforts" includes the payment of reasonable sums of money in consideration of access. Respondent shall describe in writing their efforts to obtain access. EPA may then assist Respondent in gaining access, to the extent necessary to effectuate the response actions described herein, using such means as EPA deems appropriate. Respondent shall reimburse EPA for all costs and attorney's fees incurred by the United States in obtaining such access, in accordance with the procedures in Section XV (Payment of Response Costs).

74. Notwithstanding any provision of this Settlement Agreement, EPA retains all of its access authorities and rights as well as all of its rights to require land/water use restrictions, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

75. Respondent shall submit an ICIAP for the implementation, maintenance, monitoring, and reporting of institutional controls, as specified in the RD SOW.

76. If Respondent cannot obtain access agreements, EPA may obtain access for Respondent, perform those tasks or activities with EPA contractors, or terminate the Settlement Agreement. If EPA performs those tasks or activities with EPA contractors and does not terminate the Settlement Agreement, Respondent shall perform all other activities not requiring access to that site and shall reimburse EPA for all costs incurred in performing such activities. Respondent shall integrate the results of any such tasks undertaken by EPA into its reports and deliverables.

XII. ACCESS TO INFORMATION

77. Subject to Paragraphs 78 and 79, Respondent shall provide to EPA, upon request, copies of all documents and information within their possession or control or that of their contractors or agents relating to activities at the Site or to the implementation of this Settlement Agreement, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Upon request, Respondent shall also make available to EPA, for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

78. Respondent may assert business confidentiality claims covering part or all of the documents or information submitted to EPA under this Settlement Agreement to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. §9604(e)(7), and 40 C.F.R. §2.203(b). Documents or information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies documents or information when it is submitted to EPA, or if EPA has notified Respondent that the documents or information are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such documents or information without further notice to Respondent. Respondent shall segregate and clearly identify all documents or information submitted under this Settlement Agreement for which Respondent assert business confidentiality claims.

79. Respondent may assert that certain documents, records, and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the Respondent asserts such a privilege in lieu of providing documents, it shall provide EPA with the following: a) the title of the document, record, or information; b) the date of the document, record, or information; c) the name and title of the author of the document, record, or information; d) the name and title of each addressee and recipient; e) a description of the contents of the document, record, or information; and f) the privilege asserted by Respondent. However, no documents, reports or other information created or generated that are required to be submitted to EPA pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged.

80. No claim of confidentiality shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or information related to such data and evidencing conditions at, or around, the Site.

XIII. RECORD RETENTION

81. During the pendency of this Settlement Agreement and until ten (10) years after the Respondent's receipt of EPA's notification that work has been completed, Respondent shall preserve and retain all non-identical copies of documents, records, and other

information (including documents, records, or other information in electronic form) now in its possession or control or which come into its possession or control that relate in any manner to the performance of the Work or the liability of any person under CERCLA with respect to the Site, regardless of any corporate retention policy to the contrary. Respondent shall also instruct its contractors and agents to preserve, for 10 years after notification that the work has been completed, all documents, records, and other information of whatever kind, nature, or description relating to performance of the Work.

82. At the conclusion of this document retention period, Respondent shall notify EPA at least ninety (90) days prior to the destruction of any such documents, records, or other information and, upon request by EPA, Respondent shall deliver any such documents, records, or other information to EPA. Respondent may assert that certain documents, records, and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondent asserts such a privilege, they shall provide EPA with the following: a) the title of the document, record, or other information; b) the date of the document, record, or other information; c) the name and title of the author of the document, record, or other information; d) the name and title of each addressee and recipient; e) a description of the subject of the document, record, or other information; and f) the privilege asserted by Respondent. However, no documents, records, or other information created or generated that are required to be submitted to EPA pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged.

83. Respondent hereby certifies that to the best of its knowledge and belief, it has not altered, mutilated, discarded, destroyed, or otherwise disposed of any records, documents, or other information (other than identical copies) relating to its potential liability regarding the Site since notification of potential liability by EPA or the filing of suit against it regarding the Site, and that it has fully complied with any and all EPA requests for information pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. §6927.

XIV. COMPLIANCE WITH OTHER LAWS

84. Respondent shall undertake all actions that this Settlement Agreement requires in accordance with the requirements of all applicable local, state, and federal laws and regulations, unless an exemption from such requirements is specifically provided by law or in this Settlement Agreement. The activities conducted pursuant to this Settlement Agreement, if approved by EPA, shall be considered consistent with the NCP.

85. Except as provided in Section 121(e) of CERCLA, 42 U.S.C. §9621(e), and the NCP, no permit shall be required for any portion of the Work conducted entirely on-Site. Where any portion of the Work requires a federal or state permit or approval, Respondent shall submit timely applications and take all other actions necessary to obtain and to comply with all such permits or approvals.

86. This Settlement Agreement is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

XV. PAYMENT OF RESPONSE COSTS

87. Payment for Future Response Costs:

a. Respondent shall pay EPA all Future Response Costs not inconsistent with the NCP. On a periodic basis, EPA will send Respondent a bill requiring payment that includes a printout of cost data in EPA's financial management system, known as a SCORPIOS report, which includes direct and indirect costs incurred by EPA and its contractors. Respondent shall make all payments within 30 days of receipt of each bill requiring payment, except as otherwise provided in Paragraph 89 of this Settlement Agreement, by remitting the amount of those costs via EFT, along with the following information, to EPA's Account with Federal Reserve Bank of New York, as follows:

- i. EFT to be directed to: **Federal Reserve Bank of New York**
- ii. Bank Routing Number for Federal Reserve Bank of New York: **021030004**
- iii. Federal Reserve Bank of New York account number receiving payment: **68010727**
- iv. SWIFT address: **FRNYUS33**
- v. Address: **Federal Reserve Bank of New York
33 Liberty Street
New York, NY 10045**
- vi. Field Tag 4200 of the Fedwire message to read: **D 68010727 Environmental Protection Agency**
- vii. Case Number: **CERCLA-02-2012-2031**
- viii. Amount of payment:
- ix. Name of Remitter:
- x. Site/Spill identifier: **02 – 2H**

To ensure that a payment is properly recorded, a letter should be sent to EPA, within one week of the EFT, which references the date of the EFT, the payment amount, that the payment is for Future Response Costs, the name of the Site, the case Index number, and the name and address of the party making payment to the United States and also to:

United States Environmental Protection Agency
Attn: Richard Rice
26 Martin Luther King Drive
Cincinnati Finance Center, MS:NWD
Cincinnati, Ohio 45268
E-mail (to both): rice.richard@epa.gov and AcctsReceivable.CINWD@epa.gov

Notice should also be sent to the Project Coordinators via email.

b. The total amount that Respondent shall pay pursuant to Subparagraph 87(a) shall be deposited in the American Cyanamid Superfund Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response

actions at or in connection with the Site, or to be transferred to the EPA Hazardous Substance Superfund.

88. In the event that the payments for Future Response Costs are not made within 30 days of Respondent's receipt of a bill, Respondent shall pay Interest on the unpaid balance. The interest on Future Response Costs shall begin to accrue on the date of the bill and shall continue to accrue until the date of payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondent's failure to make timely payments under this Section, including but not limited to, payment of stipulated penalties pursuant to Section XVIII.

89. Respondent may contest payment of any Future Response Costs billed under Paragraph 87, if it determines that EPA has made an accounting error, or if it believes EPA incurred excess costs as a direct result of an EPA action that was inconsistent with the NCP. Such objection shall be made in writing within 30 days of receipt of the bill and must be sent to the EPA Project Coordinator. Any such objection shall specifically identify the contested Future Response Costs and the basis for objection. In the event of an objection, Respondent shall within the 30-day period pay all uncontested Future Response Costs to EPA in the manner described in Paragraph 87. Simultaneously, Respondent shall establish an interest-bearing escrow account in a federally-insured bank duly chartered in the State of New Jersey and remit to that escrow account funds equivalent to the amount of contested Future Response Costs. Respondent shall send to the EPA Project Coordinator a copy of the transmittal letter and check paying the uncontested Future Response Costs, and copy of correspondence that establishes and funds the escrow account, including, but not limited to, information containing the identity of the bank and bank account under which the escrow account is established as well as a bank statement showing the initial balance of the escrow account. Simultaneously with establishment of the escrow account, Respondent shall initiate the Dispute Resolution procedures in Section XVI (Dispute Resolution). If EPA prevails in the dispute, within 5 days of the resolution of the dispute, Respondent shall pay the sum due (with accrued interest) to EPA in the manner described in Paragraph 87. If the Respondent prevails concerning any aspect of the contested costs, Respondent shall pay that portion of the costs (plus associated accrued interest) for which it did not prevail to EPA in the manner described in Paragraph 87. Respondent shall be disbursed any balance of the escrow account. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XVI (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding Respondent's obligation to reimburse EPA for its Future Response Costs.

XVI. DISPUTE RESOLUTION

90. Unless this Settlement Agreement expressly provides otherwise, the dispute resolution procedures of this Section shall be the exclusive mechanism for resolving disputes arising under this Settlement Agreement. The Parties shall attempt to resolve any disagreements concerning this Settlement Agreement expeditiously and informally.

91. If Respondent objects to any EPA action taken pursuant to this Settlement Agreement, including billings for Future Response Costs, they shall notify EPA in writing of their objection(s) within twenty-one (21) days of such action, unless the objection(s) has/have been resolved informally. EPA and Respondent shall have thirty (30) days from EPA's receipt of Respondent's written objection(s) to resolve the dispute through formal negotiations (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of EPA.

92. Any agreement reached by the Parties pursuant to this Section shall be in writing and shall, upon signature by both Parties, be incorporated into and become an enforceable part of this Settlement Agreement. If the Parties are unable to reach an agreement within the Negotiation Period, the Chief of the Special Projects Superfund Branch of the Emergency and Remedial Response Division, EPA Region 2 or higher level EPA management official will issue a written decision on the dispute to Respondent. EPA's decision shall be incorporated into and become an enforceable part of this Settlement Agreement. Respondent's obligations under this Settlement Agreement that are not directly in dispute shall not be tolled by submission of any objection for dispute resolution under this Section. Following resolution of the dispute, as provided by this Section, Respondent shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs first. Respondent shall proceed in accordance with EPA's final decision regarding the matter in dispute, regardless of whether Respondent agrees with the decision.

XVII. FORCE MAJEURE

93. Respondent agrees to perform all requirements of this Settlement Agreement within the time limits established under this Settlement Agreement, unless the performance is delayed by a *force majeure*. For purposes of this Settlement Agreement, a *force majeure* is defined as any event arising from causes beyond the control of Respondent, or of any entity controlled by Respondent, including, but not limited to, its contractors and subcontractors, that delays or prevents performance of any obligation under this Settlement Agreement despite Respondent's best efforts to fulfill the obligation. The requirement that Respondent exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential *force majeure* event: (a) as it is occurring; and (b) following the potential *force majeure* event, such that the delay is minimized to the greatest extent possible. A flood event that causes an exceedance of an elevation of 28 feet (NGVD 1929) at USGS Station 01403060 (Raritan River at Bound Brook) shall constitute a *force majeure* event, provided that one or more of the following conditions are met: (a) the Work Area is flooded, (b) routes of ingress/egress to and from the Work Area are flooded, or (c) the imminent threat of potential flooding caused, for safety reasons, evacuation of personnel, supplies, and equipment from a flood-prone Work Area thereby disrupting Work. *Force majeure* does not include financial inability to complete the Work or increased cost of performance.

94. If any event occurs or has occurred that may delay the performance of any obligation under this Settlement Agreement, whether or not caused by a *force majeure* event, Respondent shall notify EPA orally within seventy-two hours (72) hours of when Respondent

first knew that the event would cause a delay. Within five (5) business days thereafter, Respondent shall provide to EPA in writing: an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Respondent's rationale for attributing such delay to a *force majeure* event if it intends to assert such a claim; and a statement as to whether, in the opinion of Respondent, such event may cause or contribute to an endangerment to public health, welfare, or the environment. Failure to comply with the above requirements shall preclude Respondent from asserting any claim of *force majeure* for that event during the period of time of such failure to comply. Respondent shall be deemed to know of any circumstance of which Respondent, any entity controlled by Respondent, or Respondent's contractors knew or should have known.

95. If EPA agrees that the delay or anticipated delay is attributable to a *force majeure* event, the time for performance of the obligations under this Settlement Agreement that are affected by the *force majeure* event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the *force majeure* event shall not, of itself, extend the time for performance of any other obligation. If EPA does not agree that the delay or anticipated delay has been or will be caused by a *force majeure* event, EPA will notify Respondent in writing of its decision. If EPA agrees that the delay is attributable to a *force majeure* event, EPA will notify Respondent in writing of the length of the extension, if any, for performance of the obligations affected by the *force majeure* event.

XVIII. STIPULATED PENALTIES

96. Respondent shall be liable to EPA for stipulated penalties in the amounts set forth in Paragraphs 97 and 98 for failure to comply with the requirements of this Settlement Agreement specified below, unless excused under Section XVII (*Force Majeure*) or otherwise excused by EPA. "Compliance" by Respondent shall include completion of the activities under this Settlement Agreement or any work plan or other plan approved under this Settlement Agreement identified below in accordance with all applicable requirements of law, this Settlement Agreement, the SOWs, and any plans or other documents approved by EPA pursuant to this Settlement Agreement and within the specified time schedules established by, and approved under, this Settlement Agreement.

97. For the following major deliverables, stipulated penalties shall accrue in the amount \$1,000 per day, per violation, for the first fourteen (14) days of noncompliance; \$2,000 per day, per violation, for the fifteenth (15th) through the thirtieth (30th) day of noncompliance; and \$3,500 per day, per violation, for all violations lasting beyond thirty (30) days:

For the RD:

- a. PDI Work Plan(s);

- b. RDWP; and
- c. Final RD Reports.

For the FFS:

- a. Final FFS Report.

98. For the following interim deliverables, stipulated penalties shall accrue in the amount \$300 per day, per violation, for the first fourteen (14) days of noncompliance; \$750 per day, per violation, for the fifteenth (15th) through the thirtieth (30th) day of noncompliance; and \$2,000 per day, per violation, for all violations lasting beyond thirty (30) days:

For the RD:

- a. Submission of the name of the Project Coordinator to EPA pursuant to Section VII of this Settlement Agreement;
- b. PDI Summary Report(s);
- c. Preliminary RD Reports (as required); and
- d. Pre-final RD Reports (as required).

For the FFS:

- a. Draft FFS Report.

For the RD and FFS:

- a. Certificate of Insurance.

99. For the monthly progress reports, payments pursuant to Section XV, or any other violations of this Settlement Agreement not specified above, stipulated penalties shall accrue in the amount of \$250 per day, per violation, for the first fourteen (14) days of noncompliance; \$1,000 per day, per violation, for the fifteenth (15th) through thirtieth (30th) day of noncompliance; and \$2,000 per day, per violation, for all violations lasting beyond thirty (30) days.

100. In the event that EPA assumes performance of a portion or all of the Work pursuant to Paragraph 110 of Section XX (Reservation of Rights by EPA), Respondent shall be liable for a stipulated penalty in the amount of \$1,000,000.

101. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of the

correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: with respect to a deficient submission under Section XIII (Work to be Performed), during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies Respondent of any deficiency; and b) with respect to a decision by the EPA Management Official designated in Paragraph 92 of Section XVI (Dispute Resolution), during the period, if any, beginning on the 21st day after the Negotiation Period begins until the date that the EPA Management Official issues a final decision regarding such dispute. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Settlement Agreement.

102. Following EPA's determination that Respondent has failed to comply with a requirement of this Settlement Agreement, EPA will give Respondent written notification of the same and describe the noncompliance. EPA will send Respondent a written demand for the payment of the penalties.

103. Respondent shall pay EPA all penalties accruing under this Section within thirty (30) days of Respondent's receipt from EPA of a demand for payment of penalties, unless Respondent invokes the dispute resolution procedures under Section XVI (Dispute Resolution). All payments to EPA under this Section shall indicate that the payment is for stipulated penalties, and shall be remitted via Electronic Funds Transfer ("EFT"), along with the following information, to EPA's Account with Federal Reserve Bank of New York, as follows:

- i. EFT to be directed to: **Federal Reserve Bank of New York**
- ii. Bank Routing Number for Federal Reserve Bank of New York: **021030004**
- iii. Federal Reserve Bank of New York account number receiving payment: **68010727**
- iv. SWIFT address: **FRNYUS33**
- v. Address: **Federal Reserve Bank of New York
33 Liberty Street
New York, NY 10045**
- vi. Field Tag 4200 of the Fedwire message to read: **D 68010727 Environmental Protection Agency**
- vii. Case Number: **CERCLA-02-2012-2031**
- viii. Amount of payment:
- ix. Name of Remitter:
- x. Site/Spill identifier: **02 – 2H**

To ensure that a payment is properly recorded, a letter should be sent to EPA as provided in Paragraph 47, within one week of the EFT, which references the date of the EFT, the payment amount, that the payment is for stipulated penalties, the name of the Site, the case number, and the name and address of the party making payment to the United States and also to:

United States Environmental Protection Agency

Attn: Richard Rice
26 Martin Luther King Drive
Cincinnati Finance Center, MS:NWD
Cincinnati, Ohio 45268
E-mail (to both): rice.richard@epa.gov and AcctsReceivable.CINWD@epa.gov

Notice should also be sent to the Project Coordinators via email.

104. The payment of penalties shall not alter in any way Respondent's obligation to complete performance of the Work required under this Settlement Agreement.

105. Penalties shall continue to accrue during any dispute resolution period but need not be paid until 15 days after the dispute is resolved by agreement or receipt of EPA's decision.

106. If Respondent fails to pay stipulated penalties when due, EPA may institute proceedings to collect the penalties, as well as Interest. Respondent shall pay Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraph 103. Nothing in this Settlement Agreement shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions available by virtue of Respondent's violation of this Settlement Agreement or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Section 106(b) and 122(l) of CERCLA, 42 U.S.C. §§9606(b) and 9622(l), and punitive damages pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C. §9607(c)(3). Provided, however, that EPA shall not seek civil penalties pursuant to Section 106(b) or 122(l) of CERCLA or punitive damages pursuant to Section 107(c)(3) of CERCLA for any violation for which a stipulated penalty is provided herein, except in the case of willful violation of this Settlement Agreement or in the event that EPA assumes performance of a portion or all of the Work pursuant to Section XX (Reservation of Rights by EPA), Paragraph 110. Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Settlement Agreement.

XIX. COVENANT NOT TO SUE BY EPA

107. In consideration of the actions that will be performed and payments that will be made by Respondent under the terms of this Settlement Agreement, and except as otherwise specifically provided in this Settlement Agreement, EPA covenants not to sue or to take administrative action against Respondent pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§9606 and 9607(a), for the Work and Future Response Costs. This covenant not to sue shall take effect upon the Effective Date and is conditioned upon Respondent's complete and satisfactory performance of all obligations under this Settlement Agreement, including, but not limited to, payment of Future Response Costs pursuant to Section XV. This covenant not to sue extends only to Respondent and does not extend to any other person.

XX. RESERVATIONS OF RIGHTS BY EPA

108. Except as specifically provided in this Settlement Agreement, nothing herein shall limit the power and authority of EPA or the United States, to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, except as specifically provided in this Settlement Agreement, nothing herein shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Settlement Agreement, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring Respondent in the future to perform additional activities pursuant to CERCLA or any other applicable law.

109. The covenant not to sue set forth in Section XIX above does not pertain to any matters other than those expressly identified therein. EPA reserves, and this Settlement Agreement is without prejudice to, all rights against Respondent with respect to all other matters, including, but not limited to:

- a. claims based on a failure by Respondent to meet a requirement of this Settlement Agreement;
- b. liability for costs not included within the definition of Future Response Costs;
- c. liability for performance of response actions other than the Work;
- d. criminal liability;
- e. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;
- f. liability arising from the past, present, or future disposal, release or threat of release of Waste Materials outside of the Site; and
- g. liability for costs incurred or to be incurred by the Agency for Toxic Substances and Disease Registry related to the Site.

110. Work Takeover. In the event EPA determines that Respondent has ceased implementation of any portion of the Work, is seriously or repeatedly deficient or late in its performance of the Work, or is implementing the Work in a negligent manner which may cause an endangerment to human health or the environment, EPA may assume the performance of all or any portion of the Work as EPA determines necessary. Respondent may invoke the procedures set forth in Section XVI (Dispute Resolution) to dispute EPA's determination that takeover of the Work is warranted pursuant to this Paragraph. Costs that the United States incurs in performing the Work pursuant to this Paragraph shall be considered Future Response Costs that Respondent shall pay pursuant to Section XV (Payment of Response Costs) to the extent such costs are not inconsistent with the NCP.

Notwithstanding any other provision of this Settlement Agreement, EPA retains all authority and reserves all rights to take any and all response actions authorized by law.

XXI. COVENANT NOT TO SUE BY RESPONDENT

111. Respondent covenants not to sue and agrees not to assert any claims or causes of action against the United States, or its contractors or employees, with respect to the Work, past response actions, Future Response Costs, or this Settlement Agreement, including, but not limited to:

a. any direct or indirect claim for reimbursement from the Hazardous Substance Superfund established by 26 U.S.C. §9507, based on Sections 106(b)(2), 107, 111, 112, or 113 of CERCLA, 42 U.S.C. §§9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law; or

b. any claim arising out of response actions at, or in connection with, the Site, including any claim under the United States Constitution, the New Jersey State Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, as amended, or at common law; or

c. any claim against the United States pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§9607 and 9613, relating to the Work or payment of Future Response Costs.

112. These covenants not to sue shall not apply in the event the United States brings a cause of action or issues an order pursuant to the reservations set forth in Subparagraphs 109(b), (c), and (e) - (g), but only to the extent that Respondent's claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation.

113. Respondent reserves, and this Settlement Agreement is without prejudice to, claims against the United States subject to the provisions of Chapter 171 of Title 28 of the United States Code, for money damages for injury or loss of property or personal injury or death caused by the negligent or wrongful act or omission of any employee of the United States while acting within the scope of his office or employment under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred. However, any such claim shall not include a claim for any damages caused, in whole or in part, by the act or omission of any person, including any contractor, who is not a federal employee as that term is defined in 28 U.S.C. § 2671; nor shall any such claim include a claim based on EPA's selection of response actions, or the oversight or approval of Respondent's plans or activities. The foregoing applies only to claims that are brought pursuant to any statute other than CERCLA and for which the waiver of sovereign immunity is found in a statute other than CERCLA.

114. Nothing in this Agreement shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. §9611, or 40 C.F.R. §300.700(d).

XXII. OTHER CLAIMS

115. By issuance of this Settlement Agreement, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent. The United States or EPA shall not be deemed a party to any contract entered into by Respondent or its directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Settlement Agreement.

116. Except as expressly provided in Section XIX (Covenant Not to Sue by EPA), nothing in this Settlement Agreement constitutes a satisfaction of, or release from, any claim or cause of action against Respondent or any person not a party to this Settlement Agreement, for any liability such person may have under CERCLA, other statutes, or common law, including, but not limited to, any claims of the United States for costs, damages, and interest under Sections 106 and 107 of CERCLA, 42 U.S.C. §§9606 and 9607.

117. No action or decision by EPA pursuant to this Settlement Agreement shall give rise to any right to judicial review, except as set forth in Section 113(h) of CERCLA, 42 U.S.C. §9613(h).

XXIII. CONTRIBUTION PROTECTION

118. a. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(2) of CERCLA, 42 U.S.C. §9613(f)(2), and that Respondent is entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Sections 113(f)(2) of CERCLA, 42 U.S.C. §9613(f)(2) for "matters addressed" in this Settlement Agreement. The "matters addressed" in this Settlement Agreement are the Work and Future Response Costs.

b. The Parties Agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. §9613(f)(B), pursuant to which Respondent has, as of the Effective Date, resolved their liability to the United States for the Work and Future Response Costs.

c. Except as provided in Section XIX (Covenant Not to Sue by Respondent) of this Settlement Agreement, nothing in this Settlement Agreement precludes the United States or Respondent from asserting any claims, causes of action, or demands for indemnification, contribution, or cost recovery against any persons not parties to this Settlement Agreement. Nothing herein diminishes the right of the United States, pursuant to Sections 113(f)(2) and (3) of CERCLA, 42 U.S.C. § 9613(f)(2)(3), to pursue any such persons to obtain additional response costs or response action and to enter into settlements that give rise to contribution protection pursuant to Section 113(f)(2).

XXIV. INDEMNIFICATION

119. Respondent shall indemnify, save, and hold harmless the United States, its officials, agents, contractors, subcontractors, employees, and representatives from any and all claims or causes of action to the extent these arise from, or on account of, negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, or subcontractors, in carrying out actions pursuant to this Settlement Agreement. In addition, Respondent agrees to pay the United States all costs incurred by the United States, including, but not limited to, attorneys fees and other expenses of litigation and settlement, to the extent these arise from, or on account of, claims made against the United States based on negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, subcontractors, and any persons acting on its behalf or under its control, in carrying out activities pursuant to this Settlement Agreement. The United States shall not be held out as a party to any contract entered into, by, or on behalf of Respondent in carrying out activities pursuant to this Settlement Agreement. Neither Respondent nor any such contractor shall be considered an agent of the United States.

120. The United States shall give Respondent notice of any claim for which the United States plans to seek indemnification pursuant to this Section and shall consult with Respondent prior to settling such claim.

121. Respondent waives all claims against the United States for damages or reimbursement or for set-off of any payments made, or to be made, to the United States, to the extent these arise from, or on account of, any contract, agreement, or arrangement on behalf of Respondent and any persons for performance of Work on, or relating to, the Site. In addition, Respondent shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from, or on account of, any contract, agreement, or arrangement between Respondent and any person for performance of Work on, or relating to, the Site.

XXV. INSURANCE

122. Within thirty (30) days of the effective date of this Settlement Agreement, Respondent shall secure and shall maintain for the duration of this Settlement Agreement comprehensive general liability insurance and automobile insurance with limits of five million dollars (\$5,000,000), combined single limit, naming the EPA as an additional insured. Within the same period, Respondent shall provide EPA with certificates of such insurance and, if requested, a copy of each insurance policy. Respondent shall submit such certificates and copies of policies, if requested, each year on the anniversary of the Effective Date. In addition, for the duration of the Settlement Agreement, Respondent shall satisfy, or shall ensure that its contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondent in furtherance of this Settlement Agreement. If Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same

risks but in an equal or lesser amount, then Respondent need provide only that portion of the insurance described above that is not maintained by such contractor or subcontractor.

XXVI. FINANCIAL ASSURANCE

123. Within 30 days of the Effective Date, Respondent shall establish and maintain financial security for the benefit of EPA in the amount of \$14,500,000 in one or more of the following forms, to secure the full and final completion of Work by Respondent:

a. a surety bond unconditionally guaranteeing payment and/or performance of the Work;

b. one or more irrevocable letters of credit, payable to or at the direction of EPA, issued by financial institution(s) acceptable in all respects to EPA equaling the total estimated cost of the Work;

c. a trust fund administered by a trustee acceptable in all respects to EPA;

d. a policy of insurance issued by an insurance carrier acceptable in all respects to EPA, which ensures the payment and/or performance of the Work;

e. a corporate guarantee to perform the Work provided by one or more parent corporations or subsidiaries of Respondent, or by one or more unrelated corporations that have a substantial business relationship with Respondent; including a demonstration that any such company satisfies the financial test requirements of 40 C.F.R. Part 264.143(f); and/or

f. a corporate guarantee to perform the Work by Respondent, including a demonstration that such Respondent satisfies the requirements of 40 C.F.R. Part 264.143(f).

124. Any and all financial assurance instruments provided pursuant to this Section shall be in form and substance satisfactory to EPA, determined in EPA's sole discretion. In the event that EPA determines at any time that the financial assurances provided pursuant to this Section (including, without limitation, the instrument(s) evidencing such assurances) are inadequate, Respondent shall, within 30 days of receipt of notice of EPA's determination, obtain and present to EPA for approval one of the other forms of financial assurance listed in Paragraph 123, above. In addition, if at any time EPA notifies Respondent that the anticipated cost of completing the Work has increased, then, within 30 days of such notification, Respondent shall obtain and present to EPA for approval a revised form of financial assurance (otherwise acceptable under this Section) that reflects such cost increase. Respondent's inability to demonstrate financial ability to complete the Work shall in no way excuse performance of any activities required under this Settlement Agreement.

125. If Respondent seeks to ensure completion of the Work through a guarantee pursuant to Subparagraph 123(e) or 123(f) of this Settlement Agreement, Respondent shall:

(i) demonstrate to EPA's satisfaction that the guarantor satisfies the requirements of 40

C.F.R. Part 264.143(f); and (ii) resubmit sworn statements conveying the information required by 40 C.F.R. Part 264.143(f) annually, on the anniversary of the Effective Date, to EPA. For the purposes of this Settlement Agreement, wherever 40 C.F.R. Part 264.143(f) references "sum of current closure and post-closure costs estimates and the current plugging and abandonment costs estimates," the current cost estimate of \$14,500,000 for the Work at the Site shall be used in relevant financial test calculations.

126. If, after the Effective Date, Respondent can show that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 123 of this Section, Respondent may, on any anniversary date of the Effective Date, or at any other time agreed to by the Parties, reduce the amount of the financial security provided under this Section to the estimated cost of the remaining Work to be performed. Respondent shall submit a proposal for such reduction to EPA, in accordance with the requirements of this Section, and may reduce the amount of the security after receiving written approval from EPA. In the event of a dispute, Respondent may reduce the amount of financial assurance required hereunder only in accordance with a final decision resolving such dispute pursuant to Section XVI (Dispute Resolution).

127. Respondent may change the form of financial assurance provided under this Section at any time, upon notice to and prior written approval by EPA, provided that EPA determines that the new form of assurance meets the requirements of this Section. In the event of a dispute, Respondent may change the form of financial assurance required hereunder only in accordance with a final decision resolving such dispute pursuant to Section XVI (Dispute Resolution).

XXVII. INTEGRATION/APPENDICES

128. This Settlement Agreement and its appendices and any deliverables, technical memoranda, specifications, schedules, documents, plans, reports (other than progress reports), etc., that will be developed pursuant to this Settlement Agreement and become incorporated into, and enforceable under, this Settlement Agreement constitute the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Settlement Agreement. The Parties acknowledge that there are no representations, agreements, or understandings relating to the settlement other than those expressly contained in this Settlement Agreement.

129. In the event of a conflict between any provision of this Settlement Agreement and the provisions of any document attached to this Settlement Agreement or submitted or approved pursuant to this Settlement Agreement, the provisions of this Settlement Agreement shall control.

130. The following documents are attached to and incorporated into this Settlement Agreement:

- "Appendix A" is the OU 4 RD SOW.
- "Appendix B" is the OU 8 FFS SOW.

XXVIII. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION

131. This Settlement Agreement shall be effective on the date it is signed by the EPA Region 2 Director, Emergency and Remedial Response Division, or his delegatee (the "Effective Date").

132. This Settlement Agreement may be amended by mutual agreement of EPA and Respondent. Amendments shall be in writing and shall be effective when signed by EPA. EPA Project Coordinators do not have the authority to sign amendments to the Settlement Agreement.

133. No informal advice, guidance, suggestion, or comment by the EPA Project Coordinator or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondent shall relieve Respondent of its obligation to obtain any formal approval required by this Settlement Agreement, or to comply with all requirements of this Settlement Agreement, unless it is formally modified.

XXIX. NOTICE OF COMPLETION OF WORK

134. When EPA determines, after EPA's review of the Final Reports specified in paragraph 71.b, that all Work has been fully performed in accordance with the other requirements of this Settlement Agreement, with the exception of any continuing obligations required by this Settlement Agreement, including but not limited to, retention of records and payment of Future Response Costs, EPA will provide written notice to Respondent. If EPA determines that any such Work has not been completed in accordance with this Settlement Agreement, EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent modify the Work Plan if appropriate to correct such deficiencies. Respondent shall implement the modified and approved Work Plan and shall submit the required deliverables. Failure by Respondent to implement the approved modified Work Plan shall be a violation of this Settlement Agreement.

IT IS SO AGREED.

In the Matter of the American Cyanamid Superfund Site
CERCLA Docket No. 02-2012-2031

For The United States Environmental Protection Agency:

It is so ORDERED AND AGREED this 18th day of March, 2013.

BY: Walter E. Mugdan

Walter E. Mugdan, Director
Emergency and Remedial Response Division
U.S. Environmental Protection Agency, Region 2

THE UNDERSIGNED PARTY: enters into this Agreement in the matter of the U.S. EPA Index Number CERCLA-02-2012-2031, relating to the American Cyanamid Superfund Site, Bridgewater Township, New Jersey:

For Wyeth Holdings Corporation:

Address:

By: Steven F. Kemp
Signature

3/13/2013
Date

STEVEN F KEMP
Printed Name

VICE PRESIDENT
Title

APPENDICES

APPENDIX A

I. WORK TO BE PERFORMED

This SOW shall mean the statement of work for the development of the remedial design for the remedy selected in the OU 4 Record of Decision (OU 4 ROD) issued on September 27, 2012 by the United States Environmental Protection Agency (EPA) for the American Cyanamid Superfund Site (Site) located in Bridgewater Township, Somerset County, New Jersey. This SOW also incorporates certain tasks remaining from the Administrative Settlement Agreement and Order on Consent for Removal Action, U.S. EPA Region II, CERCLA Docket No. CERCLA: 02-2011-2015, as specified in this SOW. This SOW is incorporated into an Administrative Settlement Agreement and Order on Consent (Settlement Agreement) for the development of the Remedial Design, U.S. EPA Region II, CERCLA Docket No. CERCLA: 02-2011-2006, and is an enforceable part of the Settlement Agreement.

The Respondent shall perform the Work (defined in the Settlement Agreement) in accordance with the Settlement Agreement, the Record of Decision issued by EPA on September 27, 2012 and this SOW, including all terms, conditions and schedules (subject to *force majeure* or other agreed-upon schedule changes) set forth herein or developed and approved hereunder. All definitions in the Settlement Agreement are incorporated by reference into this SOW.

Consistent with the OU 4 ROD and the Settlement Agreement, the objectives of the Work are to design the remedy set forth in the OU 4 ROD such that the remedy will:

- 1) Remove or treat material that meets the definition of Principal Threat Waste (PTW) contained in "A Guide to Principal Threat and Low Level Wastes," EPA OSWER 9380.3-06FS (1991), to the extent practicable;
- 2) Prevent current or potential future migration of material that meets the definition of PTW from the Site that would result in direct contact or inhalation exposure, to the extent practicable;
- 3) Prevent or minimize human and ecological exposure to contaminants in soils and impoundment materials at levels above relevant risk-based remediation criteria;
- 4) Prevent or minimize sources of groundwater impacts (*i.e.*, reduce chemical loadings to groundwater) resulting in long-term improvement of groundwater quality and eventual achievement of applicable regulatory standards;
- 5) Restore, as practicable, the overburden and bedrock aquifers within the area of attainment to its expected beneficial use and to concentrations at or below the more stringent of federal Maximum Contaminant Levels (MCLs) and New Jersey Groundwater Quality Standards (NJ GWQS) within a reasonable period; and

- 6) Eliminate the migration of contaminants exceeding the more stringent of federal MCLs and NJ GWQS in the overburden and bedrock aquifers beyond the point of compliance through a combination of source actions and hydraulic controls, to the extent practicable.

The design work for OU 4 includes, but is not limited to, the following:

Impoundment Contents and Site-wide Soils:

- 1) Pre-design investigations (PDIs) to confirm movement, vapor, and direct contact control areas, as well as further delineate areas containing PTW;
- 2) Treatability testing for in-situ stabilization/solidification (S/S) to optimize the mix and develop performance measures;
- 3) Design activities associated with the excavation, relocation, consolidation, and/or treatment via in-situ S/S of impoundment contents and Site-wide soils;
- 4) Design of engineered capping systems, including vapor collection and treatment systems, as appropriate, and a Site-wide drainage system, as appropriate;
- 5) Conducting an ecological risk assessment on Impoundments 13, 17, and 24 materials to determine whether they require relocation and consolidation into appropriate portions of the North Area where the same types of controls are warranted;
- 6) PDI to delineate and address areas of impacted soils between the groundwater collection trench/hydraulic barrier wall and Impoundments 1 and 2 that were discovered during the implementation of the Removal Action;
- 7) Manage any remaining spoils generated from the Removal Action Work that are approved for on-Site reuse by NJDEP;
- 8) Design measures to mitigate permanent wetland impacts that occurred during Removal Action construction;
- 9) Investigate and address potential impacts from continuing discharges of surface water from Pond 287, as necessary;
- 10) Decommissioning of the decontamination pad within the Remediation Enclosure remaining from the Removal Action Work.;

Groundwater:

- 1) Pre-design investigations to obtain Site groundwater data necessary for the design of the groundwater extraction system (GWES) and the groundwater treatment facility (GWTF);
- 2) Design for the pre-treatment, treatment, and/or discharge of collected groundwater, if applicable;
- 3) Evaluate enhancements to the existing bedrock groundwater collection system and address bedrock groundwater impacts in the Removal Action area, satisfying the overall hydraulic control goals of the bedrock groundwater collection system identified in the NJDEP ACOs (1982, 1988 (as amended 1994));
- 4) Design a recovery system (including interceptor trenches, wells, and/or containment walls, as appropriate) for the collection of overburden groundwater, incorporating the existing overburden groundwater collection system installed as part of the Removal Action;

Institutional Controls, Maintenance, and Monitoring:

- 1) Completion of an Institutional Control Implementation and Assurance Plan (ICIAP) for the implementation, maintenance, monitoring, and reporting of institutional controls, including, but not limited to deed restrictions, restrictive covenants, and a classification exception area/well restriction area (CEA/WRA) for groundwater; and
- 2) Outline maintenance and monitoring requirements for all systems designed according to the requirements noted in the OU 4 ROD, including engineered capping, drainage and groundwater capture and treatment systems, and incorporating and modifying, as necessary, maintenance and monitoring requirements for the overburden groundwater collection and treatment system installed as part of the Removal Action.

II. PERFORMANCE STANDARDS

Performance Standards are the cleanup standards and other measures which are required to be met to achieve the cleanup goals and other objectives of the Remedial Action selected in the OU 4 ROD.

The Remedial Design (RD) shall be developed to achieve compliance with the Performance Standards set forth in the Remedial Action Objectives section of the OU 4 ROD. The groundwater remedy shall also be designed to achieve compliance with all legally applicable and relevant and appropriate requirements (ARARs) as set forth in the OU 4 ROD.

III. PROJECT SUPERVISION/MANAGEMENT

A. SUPERVISING CONTRACTOR

Respondent has retained Golder Associates Inc. and Brown and Caldwell Inc. as Supervising Contractors and such retention is hereby approved by EPA. Respondent also has retained Woodard & Curran and Quantum Management Group, Inc. as contractors and such retention is hereby approved by EPA. The Respondent shall also notify EPA of the name(s) and qualification(s) of any other contractor(s) or subcontractor(s) retained to perform the Work at least fourteen (14) days prior to commencement of such Work. EPA retains the right to disapprove of any or all of the contractors and/or subcontractors retained by the Respondent. If EPA disapproves of a selected contractor, the Respondent shall retain a different contractor and shall notify EPA of that contractor's name and qualifications within seven (7) days of EPA's disapproval. The Supervising Contractor shall be a qualified licensed professional engineering firm. All plans and specifications for construction shall be prepared under the supervision of, and signed/certified by, a licensed New Jersey professional engineer. With respect any contractor proposed to be Supervising Contractor, the Respondent shall demonstrate that the proposed contractor has a quality system that complies with the Uniform Federal Policy for Implementing Quality Systems (UFP-QS), (EPA/505/F-03/001, March 2005), by submitting a copy of the proposed contractor's Quality Management Plan ("QMP"). EPA will issue a notice of disapproval or an authorization to proceed. Any decision not to require submission of the contractor's QMP should be documented in a memorandum from the Remedial Project Manager (RPM) and Regional Quality Assurance personnel to the Site file.

B. PROJECT COORDINATOR

Within 15 days after the Effective Date, the Respondent shall designate a Project Coordinator and an Alternate Project Coordinator who shall be responsible for administration of all actions by the Respondent required by this Settlement Agreement and shall submit to EPA the name, address, telephone number, and qualifications of the Project Coordinator and Alternate Project Coordinator. The Project Coordinator and Alternate Project Coordinator shall not be an attorney. To the greatest extent possible, the designated Project Coordinator or Alternate Project Coordinator shall be present on Site or readily available during Site Work. EPA retains the right to disapprove of the designated Project Coordinator or Alternate Project Coordinator. If EPA disapproves of the designated Project Coordinator or Alternate Project Coordinator, the Respondent shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number and qualifications within 14 days following EPA's disapproval. Receipt by the Respondent's Project Coordinator of any notice or

communication from EPA relating to this Settlement Agreement shall constitute receipt by the Respondent.

IV. PROJECT REPORTS

In accordance with the Settlement Agreement, the Respondent shall provide written monthly progress reports to EPA with respect to actions and activities undertaken pursuant to the Settlement Agreement. The progress reports shall be submitted on or before the fifteenth day of each month following the effective date of the Settlement Agreement unless otherwise agreed by EPA. The Respondent's obligation to submit progress reports continues until EPA gives the Respondent written notice under the Settlement Agreement. At a minimum, these progress reports shall include the following:

- A. A description of all actions which have been taken toward achieving compliance with the Settlement Agreement during the prior month;
- B. A description of any violations of the Settlement Agreement and other problems encountered during the prior month;
- C. A description of all corrective actions taken in response to any violations or problems which occurred during the prior month;
- D. The results of all sampling, test results and other data received or generated by the Respondent during the course of implementing the Work during the prior month, to the extent that such results and data have not been included in another required deliverable. Such results shall be validated in accordance with the approved Quality Assurance Project Plan developed in conformity with this SOW;
- E. A description of all plans, actions, and data scheduled for the next eight weeks. The monthly report shall also include a description of all activities undertaken in support of community relations during the previous month and those to be undertaken in the next eight weeks;
- F. An estimate of the percentage of the Work required by the Settlement Agreement which has been completed as of the date of the progress report; and
- G. An identification of all delays encountered or anticipated that may affect the future schedule for performance of the Work, and all efforts made by the Respondent to mitigate delays or anticipated delays.

V. REMEDIAL DESIGN ACTIVITIES

The RD shall be addressed in two remedial components: (1) Impoundment Contents and Site-wide Soils; and (2) Groundwater. These remedial components will be addressed

simultaneously, on parallel tracks. The Groundwater remedial component shall include the following subcomponents: i) groundwater extraction, and ii) groundwater treatment. The Impoundment Contents and Site-wide Soils remedial component and the Groundwater subcomponents may be separated into more specific modules for the submission of PDI deliverables, as outlined in Paragraph 52 of the Settlement Agreement. The remaining Removal Action Work with respect to site soils and groundwater will be integrated and incorporated into both remedial components, as appropriate. The RD deliverables for each remedial component includes: the Pre-Design Investigation Summary Report, the Preliminary RD Report (30% completion), the Pre-Final RD Report (90% completion), and the Final RD Report (100% completion) (collectively, RD Reports). The RD Work activities to be performed in support of the development of the RD include, but are not limited to, the following:

Impoundment Contents and Site-wide Soils

- A. Implement PDIs to confirm movement, vapor, and direct contact control areas, as well as further delineate areas containing PTW;
- B. Conduct S/S treatability testing for mix optimization and development of performance measures;
- C. Implement PDI activities to delineate and address areas of impacted soils between the groundwater collection trench/hydraulic barrier wall and Impoundments 1 and 2 that were discovered during implementation of the Removal Action;
- D. Perform design activities associated with the excavation, relocation, consolidation, and/or treatment via in-situ S/S of impoundment contents and Site-wide soils;
- E. Design engineered capping systems, including vapor collection and treatment systems, as appropriate;
- F. Collect sampling data to evaluate potential surface exposures to the contents of Impoundments 13, 17, and 24. After the necessary data is collected, an ecological risk assessment for surface exposures to the contents of Impoundments 13, 17, and 24 will be conducted consistent with EPA's Ecological Risk Assessment for Superfund (EPA, 1997). The purpose of the ecological risk assessment is to determine whether any material requires relocation and consolidation into the North Area to protect ecological receptors. Implement design activities associated with the excavation, relocation, and consolidation of these contents if indicated by the Risk Assessment;
- G. Manage any remaining spoils generated from the Removal Action Work that are approved for on-Site reuse by NJDEP. Any spoils not approved by both

NJDEP and EPA for on-site reuse will be disposed of off-site per the Removal Action Order;

- H. Design measures to mitigate permanent wetland impacts that occurred during Removal Action construction in accordance with Design Package 11B - Mitigation Plan completed under the Removal Action;
- I. Decommissioning of the decontamination pad within the Remediation Enclosure remaining from the Removal Action Work. The decontamination pad in the Remediation Enclosure shall be decommissioned following the off-site disposal and/or on-site reuse of the spoils. The decommissioning procedures outlined in the Removal Action Order shall be utilized for the demolition of this decontamination pad, unless otherwise indicated by EPA. The decommissioning of the decontamination pad shall be included in a future enforcement document for the OU 4 Remedial Action; and
- J. Investigate and address potential impacts from continuing discharges of surface water from Pond 287, as necessary.

Groundwater

- K. Conduct pre-design investigations to obtain data necessary for the design of the GWES and GWTF;
- L. Evaluate enhancements to the existing bedrock groundwater collection system, and address bedrock impacts in the Removal Action area;
- M. Design a recovery system (including trenches, wells, and/or containment walls, as appropriate) for the collection of overburden groundwater, including construction of a force main to convey impacted groundwater from the Removal Action area to the future Site-wide GWTF;
- N. Design the on-Site treatment and discharge of collected groundwater systems; and
- O. Completion of an ICIAP for the implementation, maintenance, monitoring, and reporting of institutional controls, including, but not limited to deed restrictions, restrictive covenants, and a CEA/WRA for groundwater.

Common Elements of Remedial Components

- P. Outline maintenance and monitoring requirements for all systems designed according to the requirements in the OU 4 ROD, including engineered capping, drainage and groundwater capture and treatment systems;
- Q. Evaluate options for the transportation of materials to and from the Site and

develop a plan to minimize potential impacts on the community, if necessary;

- R. Design appropriate aspects of the remedy to minimize and mitigate any losses in flood storage capacity resulting from the remedial action;
- S. Design a natural stormwater management system;
- T. Conduct monitoring of surface water, sediment, groundwater, and air in accordance with EPA approved work plans;
- U. Update the Flood Emergency Procedures Plan (FEPP, March 2012) and the Flood Management and Response Plan (FMRP, June 2012), as necessary;
- V. Identify additional tasks, if any, to update the existing cultural resources survey to ensure compliance with the National Historic Preservation Act, as appropriate;
- W. Provide a description to address how the RD will be implemented using the principles in EPA Region 2's *Clean and Green Policy*; and
- X. Conduct additional tasks required by any and all modifications to the Settlement Agreement, as amended by mutual agreement of EPA and the Respondent per Section XXVIII (Effective Date and Subsequent Modification) of the Settlement Agreement.

VI. PRE-REMEDIATION DESIGN ACTIVITIES

A. PRE-DESIGN INVESTIGATION

Within forty-five (45) days from approval of the Project Coordinator, the Respondent shall submit a PDI Work Plan(s) to EPA for review and approval pursuant to Section VIII {Work to Be Performed by Respondent} of the Settlement Agreement.

The PDI Work Plan shall be prepared in accordance with this SOW, the Settlement Agreement, CERCLA and relevant EPA guidance. The PDI Work Plan may be submitted as separate PDI Work Plan deliverables for each of the modules within the two remedial components. The PDI Work Plan(s) shall include the following:

- 1) A review of existing relevant data and development of a plan to collect any necessary additional information required to conduct an ecological risk assessment for surface exposures at Impoundments 13, 17, and 24;
- 2) A review of existing soil data, followed by supplementary soil sampling, as necessary, to further delineate Movement Control, Vapor Control, and Direct

Contact Control Areas. Site-wide soils that consist of tarry substances will be specifically evaluated to determine appropriate disposition, including the extent of Principal Threat Wastes that will require complete excavation and relocation to Impoundments 3, 4 and 5, followed by treatment via in-situ S/S;

- 3) An evaluation of existing data, and collection and laboratory analysis of additional air samples, as necessary, to identify areas requiring a vapor control cap and vapor mitigation system. The evaluation shall be conducted to identify the extent of areas which have a vapor inhalation risk exceeding 10^{-6} , based on current and reasonably anticipated future Site use, and to determine appropriate vapor controls, where necessary;
- 4) An evaluation of surface and subsurface debris that may potentially interfere with in-situ S/S at Impoundments 3, 4, and 5. Samples of material to be stabilized will also be recovered for laboratory treatability studies;
- 5) A plan for the performance of bench scale treatability studies for in-situ S/S to reduce the mobility and leaching to groundwater of PTW. The treatability studies will evaluate different in-situ S/S mixes and associated correlations between leachability, unconfined compressive strength, and permeability. The most appropriate leachability test(s) will be proposed following consideration of EPA's Synthetic Precipitation Leaching Procedure, the ANSI/ANS 16.1 method, and recent methods identified in EPA's *Background Information for the Leaching Environmental Assessment Framework (LEAF) Test Methods* (EPA, 2010). Performance testing requirements will be established for field implementation purposes consistent with the OU-4 ROD based on the results of the laboratory studies correlating unconfined compressive strength, leachability, and permeability;
- 6) A site-wide geophysical survey to identify and delineate potential groundwater flow pathways in the underlying fractured bedrock aquifer;
- 7) Further refinement of the Conceptual Site Model (CSM) through collection of additional data to inform the design of a groundwater remedial system consistent with the September 2012 OU4 ROD;
- 8) Investigation to identify the nature and extent of impacted soils in areas between the groundwater collection trench/hydraulic barrier wall and Impoundments 1 and 2 that were discovered during the implementation of the Removal Action;
- 9) An evaluation of options for spoils remaining from the Removal Action that are approved for on-Site reuse by NJDEP, if any
- 10) A plan for the evaluation of the Site's flood storage capacity;

- 11) Investigation of continuing discharges of surface water from Pond 287, as necessary;
- 12) Pilot scale treatability study to confirm performance of treatment technologies selected to comply with anticipated treatment standards for discharge to surface water. Develop necessary data for a full-scale system design.
- 13) A PDI schedule in the form of a task/subtask activity bar chart; and
- 14) Additional phases of PDI, for example to support refinement of the ecological risk assessment, may be specified in addenda to the PDI Work Plan, subject to EPA approval.

Attachments to the PDI Work Plan(s) will include:

- 1) Field Sampling and Analysis Plan

The Field Sampling and Analysis Plan (FSAP) will provide details for the collection of all data necessary to complete the PDI.

- 2) Quality Assurance/Quality Control Project Plan

- a. A Quality Assurance/Quality Control Project Plan (QAPP) shall be prepared by the Respondent, which is consistent with the Uniform Federal Policy for Quality Assurance Project Plans (UFP-QAPP), Parts 1, 2 and 3, EPA-505-B-04-900A, B and C, March 2005 or newer, and other guidance documents referenced in the aforementioned guidance documents. Activities involving the collection, generation, use and/or reporting of environmental data, design; construction and/or operation of environmental technologies; development and/or use of models; and other activities that need quality assurance or quality control requirements shall incorporate quality assurance, quality control, and chain of custody procedures in accordance with the Uniform Federal Policy for Implementing Quality Systems (UFP-QS), EPA-505-F-03-001, March 2005 or newer, Uniform Federal Policy for Quality Assurance Project Plans (UFP-QAPP), Parts 1, 2 and 3, EPA-505-B-04-900A, B and C, March 2005 or newer, and other guidance documents referenced in the aforementioned guidance documents. The UFP documents may be found at: http://www.epa.gov/fedfac/documents/intergov_qual_task_force.htm.
- b. In addition to the above, guidance and procedures that are located in the EPA Region 2 DESA/HWSB website: <http://www.epa.gov/region02/qa/documents.htm>, as well as other OSWER directives and EPA Region 2 policies should be followed, as appropriate. Subsequent amendments to the above, upon notification by EPA to the

Respondent of such amendments, shall apply only to procedures conducted after such notification.

- c. The Respondent will provide electronic submittals of sampling and geologic data in accordance with Region 2 policies, guidelines, and formats. The Region 2 Electronic Data Deliverable (EDD) is a standardized format for all electronic submittals. Electronic submittals of sampling and geologic data will be made in accordance with the project schedule and in conjunction with the submittal of draft reports. The Respondent is responsible for reviewing and approving any contractor work for consistency with Region 2 EDD requirements. The Region 2 EDD Guidance and Requirements include instruction manuals and data submission and validation files.
- d. The most recent EDD Guidance and Requirements can be found at: <http://www.epa.gov/region02/superfund/medd.htm>. Environmental data, as referred to above, are defined as any measurements or information that describe environmental processes, location, or conditions; ecological or health effects and consequences; or the performance of environmental technology. For EPA, environmental data include information collected directly from measurements, produced from models, and compiled from other sources such as data bases or the literature.
- e. The QAPP shall also specifically include the following items:
 - 1. An explanation of the way(s) the sampling, analysis, testing, and monitoring will produce data for the RD;
 - 2. A detailed description of the sampling, analysis, and testing to be performed, including sampling methods, analytical and testing methods, sampling locations and frequency of sampling; and
 - 3. A map depicting sampling locations (to the extent that these can be defined when the QAPP is prepared).
- f. To provide quality assurance and maintain quality control with respect to all samples to be collected, Respondent shall ensure the following:
 - 1. Quality assurance and chain-of-custody procedures shall be performed in accordance with standard EPA protocol and guidance, including the guidance provided in the EPA Region 2 Quality Assurance Homepage, and the guidelines set forth in the Settlement Agreement.
 - 2. Once laboratories have been chosen, each laboratory's quality assurance plan (LQAP) should be submitted to EPA for review. In addition, the laboratory should submit to EPA current copies (within

the past six months) of laboratory certification provided from either a State or Federal Agency which conducts certification. The certification should be applicable to the matrix/analyses which are to be conducted. If the laboratory does not participate in the Contract Laboratory Program (CLP), they must submit to EPA the results of performance evaluation (PE) samples for the constituents of concern from within the past six months or they must complete PEs for the matrices and analyses to be conducted and results must be submitted with the LQAP.

For any analytical work performed, including that done in a fixed laboratory, in a mobile laboratory, or in on-site screening analyses, Respondent must submit to EPA a "Non-CLP Superfund Analytical Services Tracking System" form for each laboratory used during a sampling event, within thirty (30) days after acceptance of the analytical results unless otherwise agreed by EPA. Upon completion, such documents shall be submitted to the EPA Remedial Project Manager, with a copy of the form and transmittal letter to:

Regional Sample Control Center Coordinator
U.S. EPA Region 2
Division of Environmental Science & Assessment
2890 Woodbridge Avenue, Bldg. 209, MS-215
Edison, NJ 08837

3. The laboratory used for analyses of samples must perform all analyses according to accepted EPA methods.
4. Unless indicated otherwise in the approved QAPP, Respondent will validate up to 100% of the data based on EPA's request.
5. Submission of the validation package (checklist, report and Form I5 containing the final data) to EPA, to the extent applicable, prepared in accordance with the provisions of Subparagraph 8, below.
6. Assurance that all analytical data that are validated as required by the QAPP are validated according to the latest version of EPA Region 2 data validation Standard Operating Procedures. Region 2 Standard Operating Procedures are available at:
<http://www.epa.gov/region02/qa/documents.htm>
7. Unless indicated otherwise in the QAPP, Respondent shall require deliverables equivalent to CLP data packages from the laboratory for analytical data. Upon EPA's request, the Respondent shall submit to EPA the full documentation (including raw data) for this analytical data. EPA reserves the right to perform an independent data

validation, data validation check, or qualification check on generated data.

8. Respondent shall insert a provision in their contract(s) with the laboratory used for analyses of samples, which will require granting access to EPA personnel and authorized representatives of the EPA for the purpose of ensuring the accuracy of laboratory results related to the Site.

9. Document Field Activities.

The Respondent shall consistently document the quality and validity of field and laboratory data compiled during the Work. Information gathered under this Settlement Agreement will be consistently documented and adequately recorded by the Respondent in well maintained field logs and laboratory reports. The method(s) of documentation must be specified in the PDI Work Plan and/or QAPP. Field logs or dedicated field log-books must be used to document observations, measurements, and significant events that have occurred during field activities. Electronic field record keeping can be used, however, it does not eliminate the requirement for manual record keeping and/or submittals. Measurements or observations may also be recorded by appropriate electronic media and transferred into the report from these media. Laboratory reports must document sample custody, analytical responsibility, analytical results, adherence to prescribed protocols, nonconformity events, corrective measures, and/or data deficiencies.

10. Maintain Sample Management and Tracking

The Respondent shall maintain field reports, sample shipment records, analytical results, and QA/QC reports, in addition, the Respondent shall safeguard chain-of custody forms and other project records to prevent loss, damage, or alteration of project documentation.

- g. In the event that additional sampling analyses are required, Respondent shall submit to EPA an addendum to the QAPP for approval by EPA.

- 3) Health and Safety Contingency Plan

- a. A Health and Safety Contingency Plan (HSCP) for all activities performed under the Settlement Agreement shall be developed by Respondent to address the protection of public health and safety and the response to contingencies that could impact public health, safety, and the environment. The HSCP shall satisfy the requirements of the Occupational Safety and Health Guidance for Hazardous Waste Site Activities, (June 1990, DHHS

NIOSH Publication No. 90-117), and the Occupational Safety and Health Administration, U.S. Department of Labor (OSHA) requirements cited below:

1. PDI and RD activities by or on behalf of Respondent shall be performed in such a manner as to ensure the safety and health of personnel so engaged. Activities shall be conducted in accordance with all pertinent general industry (29 CFR Part 1910) and construction (29 CFR Part 1926) OSHA standards, and EPA's Standards Operating Safety Guides (OSWER, 1988), as well as any other applicable State and municipal codes or ordinances. All Site activities by the Respondent, its contractors or subcontractors, shall comply with those requirements set forth in OSHA's final rule entitled Hazardous Waste Operations and Emergency Response, 29 CFR §1910.120, Subpart H.
2. The HSCP shall include, at a minimum, the following items:
 - a. Plans showing the location and layout of any temporary facilities to be constructed;
 - b. Description of the known hazards and evaluation of the risks associated with contaminated areas (impoundments, soils and groundwater) and related potential health impacts;
 - c. List of key personnel and alternates responsible for safety, response operations, and protection of the public;
 - d. Description of levels of protection (based on specified standards) to be used by all personnel;
 - e. Delineation of Work, decontamination, and safe zones, and definitions of the movement of zones;
 - f. Description of decontamination procedures for personnel and equipment, and handling and removal of disposable clothing or equipment;
 - g. Incidental emergency procedures which address emergency care for personnel injuries and exposure problems, and containment measures. These procedures shall include evacuation routes, internal and external communications procedures for response to fire, explosion, or other emergencies, the name of the nearest hospital and the route to that hospital. Local agencies with the capability to respond to emergencies shall be identified and their

capabilities shall be described. A description of the procedures for informing the community of these measures shall be outlined;

- h. Description of the personnel medical surveillance program in effect;
- i. Description of monitoring for personnel safety;
- j. Description of routine and special personnel training programs; and
- k. Description of an air monitoring program to determine concentrations of airborne contaminants to which workers on-Site and persons near the Site boundary may be exposed. The results of work-zone air monitoring may be used as a trigger for implementing Site-boundary air monitoring, additional control measures, and/or cessation of the Work.

Subject to approval by EPA, the above supporting plans may utilize existing, approved Site-specific plans. The supporting plans may be submitted as separate documents or may be incorporated into the PDI Work Plan(s).

EPA will either approve the PDI Work Plan(s) and supporting plans or require modifications as per the Settlement Agreement. Following EPA approval, the PDI Work Plan(s) shall be incorporated into and become an enforceable part of the Settlement Agreement.

The Respondent shall conduct the PDI work for a given module and any subsequent phases in accordance with the final approved PDI Work Plan for that module, associated addenda, this SOW and Settlement Agreement. The schedule for the completion of field sampling activities for a given module shall be included in the PDI Work Plan for that module and is subject to EPA approval. At any time during the Work, if information becomes available that may indicate modifications to the PDI Work Plan(s) may be needed to meet the study objectives, the parties shall confer as soon as possible to attempt to agree on the required changes. Any modifications will be made in accordance with Section VIII of the Settlement Agreement.

Following completion of all PDI field sampling activities for a given module, pursuant to the EPA-approved schedule for that module, the Respondent shall submit a Field Sampling and Analysis Report(s) (FSAR) summarizing the results from the sampling activities, including a brief technical memorandum summarizing the PDI findings. The FSAR(s) shall be submitted to EPA for review and approval pursuant to Section IX (EPA Approval of Plans and other Submissions) of the Settlement Agreement. EPA comments on the FSAR(s) shall be addressed in a response to comments or in a subsequent design deliverable, as

approved by EPA. Within forty-five (45) days from EPA approval of all FSAR(s) for a given remedial component, the Respondent shall submit a PDI Summary Report summarizing all of the PDI findings within that remedial component. The PDI Summary Reports shall be submitted to EPA for review and approval pursuant to Section IX (EPA Approval of Plans and other Submissions) of the Settlement Agreement. EPA comments on the PDI Summary Reports shall be addressed in a response to comments or in a subsequent design deliverable, as approved by EPA.

B. DESIGN OF THE SITE-WIDE GROUNDWATER EXTRACTION SYSTEM

The Preliminary RD of the Site-wide GWES will present the design rationale, basis, parameters, and assumptions to be used in completing the design of the overburden and bedrock groundwater hydraulic control system for the Site as a whole. The Preliminary RD will include: groundwater model calibration and sensitivity analyses addressing the impact on extraction flow rates (including estimation of peak flow rates following flooding conditions); layout and flow rates for the conceptual extraction system design; development of preliminary contaminant mass loading rate estimates for critical groundwater treatment parameters; and an evaluation of the technical feasibility of discharge methods for treated groundwater.

In accordance with the schedule in Section IV of this SOW, the Respondent shall submit a Preliminary RD Report for the Site-wide GWES, including tables and figures.

C. ADVANCED DESIGN OF THE CAP SYSTEM AT THE LOCATION OF THE PROPOSED SITE-WIDE GROUNDWATER TREATMENT FACILITY (IF NECESSARY)

If the GWTF is located within the North Area in an area requiring a cap system, then the design of the portion of the cap in this area shall be advanced for EPA review and approval so as to allow for potential construction of the GWTF in advance of other Site-wide Remedy components.

A PDI Work Plan addendum or distinct task within the PDI Work Plan detailed in Section VI.A addressing the collection of necessary data to support the design of the cap system at the GWTF location will be prepared and submitted to EPA for review and approval. The objective of this element of the PDI Work Plan will be to provide necessary geotechnical information for design and to identify the presence and extent of tarry materials and PTW. A Preliminary RD of the cap system in the GWTF area will be prepared and submitted to the EPA for review and approval, and will include appropriate means to address any tarry materials and PTW identified in accordance with the OU 4 ROD. The Pre-Final RD for the cap system in the GWTF area shall address EPA comments on the Preliminary RD deliverable.

D. DESIGN OF THE SITE-WIDE GROUNDWATER TREATMENT FACILITY

The Preliminary RD of the Site-wide GWTF will present the design rationale, basis, parameters, and assumptions to be used in completing the design of the groundwater treatment system for the Site, including conveyance systems from various bedrock and overburden groundwater extraction areas to the GWTF and discharge lines from the GWTF to the Raritan River. The Preliminary RD will include preliminary discharge limitations, site plan, treatment process description, process flow diagram, mass balance, piping and instrumentation diagrams, equipment general arrangement, and list of required permit equivalencies.

VII. REMEDIAL DESIGN WORK PLAN

Within sixty (60) days, or within such additional time as EPA permits, from EPA approval of the PDI Summary Report for a given remedial component, the Respondent shall submit to EPA a Remedial Design Work Plan (RDWP) for that component for review and approval pursuant to Section VIII (Work to Be Performed) of the Settlement Agreement.

The RDWP shall be prepared in accordance with this SOW, the Settlement Agreement, CERCLA and relevant EPA guidance, including the EPA document entitled *Guidance on Oversight of Remedial Designs and Remedial Actions performed by Potentially Responsible Parties*, (OSWER directive 9355.5-01, EPA/540/g-90-001), dated April 1990, and shall be in conformance, *inter alia*, with the Superfund Remedial Design and Remedial Action Guidance, dated June 1986, and any updates thereto.

Separate RDWPs for each remedial component or subcomponent may be submitted. Each RDWP shall include tasks, and schedules for development of the RD for each component or subcomponent, that are necessary to ensure compliance with performance standards and ARARs, including the preparation and submission of a Preliminary RD Report (30% completion), a Pre-Final RD Report (90% completion), and a Final RD Report (100% completion) (collectively, RD Reports). The RDWP shall be organized by remedial components. At a minimum, the RDWP shall include, but not be limited to, the following:

- A. A description of all RD Tasks.
- B. A detailed schedule for all RD activities which shall be in the form of a task/subtask activity bar chart or critical path method sequence of events.
- C. A plan for field-scale pilot confirmation testing of the proposed in-situ S/S of Impoundments 3, 4, and 5 to confirm the conclusions of the bench scale treatability studies using unconfined compressive strength and permeability criteria.
- D. Plans for mitigating any loss of flood storage as a result of the remedy.

- E. A plan for the evaluation of options for transporting materials to and from the Site.
- F. An ICIAP for the implementation, maintenance, monitoring, and reporting of institutional controls, including, but not limited to deed restrictions, restrictive covenants, and a CEA/WRA for groundwater.

The ICIAP shall include, but shall not be limited to: (a) a description of the pathways for potential human exposure to Waste Material that may remain during and/or after completion of construction of the Remedial Action; (b) a description of the areas where human activities should be restricted, including legal descriptions for such areas, sample maps, and a plan for preparing final survey maps (e.g., survey of hazardous waste cap); (c) a list of properties where Proprietary Controls are needed; (d) a description of the proposed Institutional Controls and their purpose; (e) a description of the proposed duration of each Institutional Control and an explanation for such duration; (f) a schedule for implementing each Institutional Control; (g) a schedule for completing title work; (h) draft Proprietary Controls enforceable under state law to implement the proposed land/water use restrictions; (i) a description of the authority of each affected property owner to implement each Proprietary Control, including title insurance commitments or other title evidence acceptable to EPA for proposed Proprietary Controls; (j) a description of all prior liens and encumbrances existing on any real property that may affect the Proprietary Controls or the protectiveness of the remedy, and a plan for the release or subordination of any such liens and encumbrances (unless EPA waives the release or subordination of such liens or encumbrances); (k) a plan for monitoring, maintaining, reporting on, and ensuring the continued efficacy of the Institutional Controls and a contingency plan in the event ICs are ineffective; and (l) a schedule for biennial certifications regarding whether the Institutional Controls remain in place, regarding whether the Institutional Controls have been complied with, and regarding enforcement of the Institutional Controls. The ICIAP shall be effective upon EPA's approval, and shall become an enforceable requirement of a future enforcement document for the OU 4 Remedial Action.

- G. A plan for the performance of air monitoring, as necessary, during construction activities at the Site to ensure that air emissions resulting from the construction activities meet applicable or relevant and appropriate air emission requirements.
- H. A Community Health and Safety Plan (CHSP) for all activities performed under the Settlement Agreement with a focus on the protection of the health and safety of the surrounding community.

- I. A plan to address adverse impacts caused by the Work, including the Removal Action Work to streams, surface water bodies, and wetland areas in accordance with ARARs.
- J. A plan to conduct any additional tasks, if necessary, to update the existing cultural resources survey to ensure compliance with the National Historic Preservation Act, as appropriate.
- K. Access and other approvals.

The RDWP shall include descriptions of known access and other approvals and institutional controls which the Respondent will need to comply with the Settlement Agreement, with the exception of those approvals needed from the EPA. This description shall detail how such access and other approvals will be sought, and shall include a schedule for obtaining all necessary access and other approvals including, but not limited to, approval from any off-Site facility accepting waste materials shipped by or on behalf of the Respondent. This description shall be updated as appropriate, if subsequent approvals are required.

VIII. APPROVAL OF REMEDIAL DESIGN WORK PLANS

EPA will either approve the RDWP or require modifications as per the Settlement Agreement. Following EPA approval, the RDWP shall be incorporated into and become an enforceable part of the Settlement Agreement.

IX. REMEDIAL DESIGN

- A. The Respondent shall perform the RD activities in conformance with each RDWP approved by the EPA and within the time frames specified in the RD schedule (subject to *force majeure* or other agreed-upon schedule changes) contained therein or as otherwise approved by EPA.
- B. The Site-wide RD shall provide the details necessary for the implementation of the remedial action (RA). The Site-wide RD will include the detailed engineering design for construction of the direct contact, vapor control and movement control caps; solidification/stabilization (or similar appropriate method) of the materials in Impoundments 3, 4, and 5; addressing tarry materials and PTW in the North Area; remediation of Impoundments 13, 17, and 24, as defined by the ecological risk-assessment; construction of the Site-wide GWES in the overburden and bedrock aquifers; construction of the cap in the area of the Site-wide GWTF (if necessary); construction of the Site-wide GWTF; and completion of any remaining Removal Action work.
- C. The activities to be performed in support of the RD include development of Preliminary (30% completion), Pre-Final (90% completion), and Final (100%

completion) RD Reports (collectively, RD Reports). Only a Preliminary RD Report shall be submitted for the Site-wide GWTF.

D. The RD Reports shall be submitted to the EPA in accordance with the schedule set forth in the EPA-approved RDWP. Each RD Report shall include a discussion of the design criteria and objectives, with emphasis on the capacity and ability to meet design objectives successfully. Each report shall also include the plans and specifications that have been developed at that point in time, along with a design analysis. The design analysis shall provide the rationale for the plans and specifications, including results of relevant sampling and testing performed, supporting calculations and documentation of how these plans and specifications will meet the requirements the Performance Standards and shall provide a discussion of any impacts these findings may have on the RD. In addition to the above, the RD Reports shall include the following items:

1. Technical specifications for photographic documentation of the remedial construction work;
2. A discussion of the manner in which the RA will achieve the Performance Standards;
3. A discussion of the manner in which the RA will apply EPA Region 2's *Clean and Green Policy* including the possibility of beneficial reuse of materials, subject to satisfaction of applicable acceptance criteria;
4. A draft schedule for RA activities and a preliminary schedule for O&M activities;
5. The draft schedule for the RA shall provide for the completion of the remedy. The draft schedule for RA and monitoring activities may be revised during the remedial process, subject to EPA's approval;
6. A Construction Quality Assurance Project Plan (CQAPP), which shall detail the approach to quality assurance during construction activities at the Site;
7. A report describing those efforts made to secure access and institutional controls and obtain other approvals and the results of those efforts (see Sections VI. J and K. above). Legal descriptions of property or easements to be acquired, if necessary, shall be provided; and
8. A plan for implementation of construction and construction oversight.

X. APPROVAL OF RD REPORTS

- A. EPA will review and comment on the Preliminary RD Reports (30% completion) and the Pre-Final RD Report (90% completion). The Respondent shall make those changes required by EPA's comments in the succeeding design report (e.g. changes required by comments on the Preliminary RD Report (30%) shall be made in the Pre-Final RD Report (90% completion)).
- B. The Respondent shall submit the Final RD Report (100% completion) for each remedial component to EPA for review and approval pursuant to Section XI (EPA Approval of Plans and Other Submissions) of the Settlement Agreement. Once approved by EPA, the Final RD Report (100% completion) shall be incorporated into and become an enforceable part of the Settlement Agreement.

XI. FINAL REPORT AND COMPLETION OF WORK

- A. Submission of the Final RD Report to EPA for review and approval, shall constitute submittal of the Final Report pursuant to Section X, Paragraph 71 (Final Reports) of the Settlement Agreement. The Final Reports shall show that all RD Work has been fully performed.
- B. If EPA determines that any Work has not been completed in accordance with this Settlement Agreement, EPA will notify the Respondent, provide a list of the deficiencies, and require that the Respondent modify the Work Plan if appropriate to correct such deficiencies. The Respondent shall implement the modified and approved Work Plan and shall submit the required deliverables.
- C. After EPA approves the Final Report, EPA will provide written notice to the Respondent pursuant to Section XXIX (Notice of Completion of Work) of the Settlement Agreement.

APPENDIX B

I. WORK TO BE PERFORMED

This SOW shall mean the statement of work for the development of an OU 8 Focused Feasibility Study (FFS) for the American Cyanamid Superfund Site (Site) located in Bridgewater Township, Somerset County, New Jersey. This SOW also incorporates certain tasks remaining from the Administrative Settlement Agreement and Order on Consent for Removal Action, U.S. EPA Region II, CERCLA Docket No. CERCLA: 02-2011-2015, as specified in this SOW. This SOW is incorporated into an Administrative Settlement Agreement and Order on Consent (Settlement Agreement) for the development of the Remedial Design, U.S. EPA Region II, CERCLA Docket No. CERCLA: 02-2011-2006, and is an enforceable part of the Settlement Agreement.

The Respondent shall perform the Work (defined in the Settlement Agreement) in accordance with the Settlement Agreement, and this SOW, including all terms, conditions and schedules (subject to *force majeure* or other agreed-upon schedule changes) set forth herein or developed and approved hereunder. All definitions in the Settlement Agreement are incorporated by reference into this SOW.

The FFS Work for OU 8 includes, but is not limited to completion of a FFS for Impoundments 1 and 2. The objectives of the FFS Work are to:

- 1) Develop remedial alternatives for the materials in Impoundments 1 and 2;
- 2) Present sufficient information to evaluate risks to human health and ecological receptors;
- 3) Present sufficient information for the evaluation of remedial alternatives and the selection of a remedy; and
- 4) Complete the remaining tasks from the Removal Action Work outlined in Section III of this SOW.

II. PROJECT SUPERVISION/MANAGEMENT

A. SUPERVISING CONTRACTOR

Respondent has retained CH2M Hill as the Supervising Contractor and such retention is hereby approved by EPA. Respondent has also retained Quantum Management Group, Inc. and Focus Environmental as contractors and such retention is hereby approved by EPA. The Respondent shall also notify EPA of the name(s) and qualification(s) of any other contractor(s) or

subcontractor(s) retained to perform the Work at least fourteen (14) days prior to commencement of such Work. EPA retains the right to disapprove of any or all of the contractors and/or subcontractors retained by the Respondent. If EPA disapproves of a selected contractor, Settling Party shall retain a different contractor and shall notify EPA of that contractor's name and qualifications within seven (7) days of EPA's disapproval. With respect any contractor proposed to be Supervising Contractor, the Respondent shall demonstrate that the proposed contractor has a quality system that complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995), by submitting a copy of the proposed contractor's Quality Management Plan (QMP). The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2" (EPA/240/B-01/002, March 2001) or equivalent documentation as determined by EPA. EPA will issue a notice of disapproval or an authorization to proceed. Any decision not to require submission of the contractor's QMP should be documented in a memorandum from the Remedial Project Manager (RPM) and Regional Quality Assurance personnel to the Site file.

B. PROJECT COORDINATOR

Within 15 days after the Effective Date, the Respondent shall designate a Project Coordinator and an Alternate Project Coordinator who shall be responsible for administration of all actions by the Respondent required by this Settlement Agreement and shall submit to EPA the name, address, telephone number, and qualifications of the Project Coordinator and Alternate Project Coordinator. The Project Coordinator and Alternate Project Coordinator shall not be an attorney. To the greatest extent possible, the designated Project Coordinator or Alternate Project Coordinator shall be present on Site or readily available during Site Work. EPA retains the right to disapprove of the designated Project Coordinator or Alternate Project Coordinator. If EPA disapproves of the designated Project Coordinator or Alternate Project Coordinator, the Respondent shall retain a different Project Coordinator or Alternate Project Coordinator and shall notify EPA of that person's name, address, telephone number and qualifications within 14 days following EPA's disapproval. Receipt by the Respondent's Project Coordinator of any notice or communication from EPA relating to this Settlement Agreement shall constitute receipt by the Respondent.

III. FFS ACTIVITIES

The FFS Work activities to be performed in support of the development of the Final FFS Report include, but are not limited to, the following:

- A. Development of an FFS Work Plan. The FFS Work Plan has been submitted and was approved by EPA on September 13, 2012;
- B. Completion of a Technology Evaluation, including:
 - a. Development of a Technology Evaluation Work Plan. The Technology Evaluation Work Plan has been submitted and was approved by EPA on June 25, 2012;
 - b. Performance of laboratory scale treatability testing, including development of a Laboratory Treatability Studies Work Plan and Treatability Studies Results Report. The Laboratory Treatability Studies Work Plan has been submitted and was approved by EPA on June 25, 2012;
 - c. Performance of field demonstration testing, including development of a Field-Scale Demonstration Study Design Report and a Field-Scale Demonstration Study Results Report;
 - d. Identification and screening of remedial technologies and process options; and
 - e. Presentation of preliminary Technology Evaluation results to EPA.
- C. Presentation of the preliminary screening of remedial alternatives to EPA;
- D. Preparation and submission of Draft FFS Report(s) to EPA;
- E. Preparation and submission of a Final FFS Report to EPA; and
- F. Completion of the following task remaining from the Removal Action work:
 - a. Decommissioning of the decontamination pad located near the former drying bed area that was constructed as part of the Removal Action Work. This decontamination pad may be utilized for activities associated with Impoundments 1 and 2 and shall be decommissioned under OU 8. The decontamination pad shall be decommissioned following the completion of the Impoundments 1 and 2 Work. The decommissioning procedures for the demolition of this decontamination pad shall be developed as part of the OU 8 remedy.

IV. PROJECT DELIVERABLES

As set forth in the Settlement Agreement, Respondent is required to submit project deliverables to EPA, including, but not limited to:

- A. Field-Scale Demonstration Study Design Report

Respondent shall submit a Draft Field-Scale Demonstration Study Design Report within three (3) months of the Execution Date of the Settlement Agreement or within the FFS schedule already provided in the Impoundments 1 and 2 FFS Work Plan that was approved by EPA on September 13, 2012, whichever is later, or as otherwise extended by EPA. Within fourteen (14) days of receiving EPA comments on the Draft Final Field-Scale Demonstration Study Design Report or as otherwise agreed by EPA, Respondent shall submit a Final Field-Scale Demonstration Study Design Report to EPA for approval pursuant to Section XI (EPA Approval of Plans and Other Submissions) of the Settlement Agreement, unless Respondent is directed otherwise by EPA in writing. Upon approval by EPA, the Field-Scale Demonstration Study Design Report shall be deemed incorporated into the Settlement Agreement by reference.

B. Field-Scale Demonstration Study Results Report

Within nine (9) months of the approval of the Field-Scale Demonstration Study Design Report or as otherwise agreed by EPA, Respondent shall submit a Field-Scale Demonstration Study Results Report to EPA. EPA may provide comments on the report, in which case Respondent shall amend and submit to EPA a revised Field-Scale Demonstration Study Results Report which is responsive to all EPA comments, within fourteen (14) days of receiving EPA's comments, unless Respondent is directed otherwise by EPA in writing. Upon approval by EPA, the Field-Scale Demonstration Study Results Report shall be deemed incorporated into the Settlement Agreement by reference.

C. Technology Evaluation Presentation

Within forty-five (45) days of the approval of the Field-Scale Demonstration Study Results Report or as otherwise agreed by EPA, Respondent shall provide EPA with a Technology Evaluation Presentation, as described in the FFS Work Plan.

D. Screening of Alternatives Presentation

Within twenty-one (21) days of the receipt of EPA comments on the Technology Evaluation Presentation or as otherwise agreed by EPA, Respondent shall provide EPA with a Screening of Alternatives Presentation, as described in the FFS Work Plan.

E. FFS Report

Within thirty (30) days of the receipt of EPA comments on the Screening of Alternatives presentation or as otherwise agreed by EPA, Respondent shall submit a Draft FFS Report to EPA. Within fourteen (14) days of receiving

EPA comments on the Draft FFS Report or as otherwise agreed by EPA, Respondent shall submit a Final FFS Report to EPA for approval pursuant to Section XI (EPA Approval of Plans and Other Submissions) of the Settlement Agreement, unless Respondent is directed otherwise by EPA in writing. Upon approval by EPA, the FFS Report shall be deemed incorporated into the Settlement Agreement by reference.

The FFS Reports shall accomplish the following:

1. Summarize FFS objectives;
2. Summarize remedial objectives;
3. Summarize the ecological and human health risks to justify the need for a response action;
4. Articulate general response actions;
5. Identify and screen the remedial technologies;
6. Provide remedial alternatives description;
7. Provide a detailed analysis and cost of remedial alternatives;
8. Provide a summary of the laboratory treatability testing;
9. Provide a detailed analysis of any pilot studies conducted in support of the FFS; and
10. Present a summary and conclusion.

Respondent's technical feasibility considerations shall follow the criteria established in the National Contingency Plan (NCP) including a careful study of any circumstances that may prevent a remedial alternative from accomplishing the Remedial Action Objectives. Consistent with the NCP, the Site characteristics must be considered as the technical feasibility of each alternative is evaluated. Specific items to be addressed include reliability (operation over time), safety, operation and maintenance, ease with which the alternative can be implemented, and time needed for implementation. Respondent shall evaluate remedial alternatives for Impoundments 1 and 2 in the context of other on-going Site programs, such as the OU 4 Site-wide Remedy and the Removal Action Work to address groundwater discharges in the vicinity of Impoundments 1 and 2.

V. MONTHLY PROGRESS REPORTS

In addition to the other deliverables set forth in the Settlement Agreement, the Respondent shall provide written monthly progress reports to EPA with respect to actions and activities undertaken pursuant to the Settlement Agreement. The progress reports shall be submitted on or before the fifteenth day of each month following the effective date of the Settlement Agreement. The Respondent's obligation to submit progress reports continues until EPA gives the Respondent written notice under the Settlement Agreement. The Respondent shall report all communications that it has with local, state, or other federal authorities related to the RD Work or FFS Work in the monthly progress reports. At a minimum, these progress reports shall include the following:

- A. A description of all actions which have been taken toward achieving compliance with the Settlement Agreement during the prior month;
- B. A description of any violations of the Settlement Agreement and other problems encountered during the prior month;
- C. A description of all corrective actions taken in response to any violations or problems which occurred during the prior month;
- D. The results of all sampling, test results and other data received or generated by the Respondent during the course of implementing the Work during the prior month, to the extent that such results and data will not be included in another required deliverable. Such results shall be validated in accordance with the approved Quality Assurance Project Plan developed in conformity with the SOW;
- E. A description of all plans, actions, and data scheduled;
- F. An estimate of the percentage of the Work required by the Settling Agreement which has been completed as of the date of the progress report; and
- G. An identification of all delays encountered or anticipated that may affect the future schedule for performance of the Work, and all efforts made by the Respondent to mitigate delays or anticipated delays.

VI. FINAL REPORT AND COMPLETION OF WORK

- a. Submission of the final FFS Report to EPA for review and approval shall constitute submittal of the Final Report pursuant to Section X, Paragraph 71 (Final Reports) of the Settlement Agreement.
- b. If EPA determines that any Work has not been completed in accordance with this Settlement Agreement, EPA will notify the Respondent, provide a list of the deficiencies, and require that the Respondent modify the Work Plan if

appropriate to correct such deficiencies. The Respondent shall implement the modified and approved Work Plan and shall submit the required deliverables.

- c. After EPA approves the Final Report, EPA will provide written notice to the Respondent pursuant to Section XXIX (Notice of Completion of Work) of the Settlement Agreement.

